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THE VALUE OF COMMERCIAL MANURES.

DR. EVAN PUGH, President of the Agricultural College of Pennsylvania, communicates to the *Country Gentleman* the result of analyses made in the College laboratory of some of the artificial manures offered for sale in this country.

He adopts Prof. S. W. JOHNSON's estimate of the value of the leading ingredients found in manures, as follows:

Potash (as in wood ashes),	4	cts. per lb.
Phosphoric acid in raw or burned bone phosphates,	4½	" "
Phosphoric acid in combinations soluble in water (as in Superphosphates),	12½	" "
Nitrogen in forms easily soluble	17	" "
Sulphuric acid	1	" "

This is as fair an estimate as could be made. It is somewhat higher than that usually adopted in England, and is, therefore favorable to the manufacturers.

The following artificial manures have been analyzed and their composition accurately determined. The amount of ingredients which they contain being thus known, nothing is easier than to ascertain their exact value. Full details of their composition are given, and the results are as follows:

Manures.	Selling price.	Real value.
Rhodes' Superphosphate,	$45 00	$37 50
Berger & Butts' Superphosphate,	45 00	23 80
Baugh & Son's Raw-bone Phosphate,	45 00	22 40
Baugh & Son's Ground Raw-bone,	35 00	36 20
Tasker & Clarke's Phosphoric Ferillizer,	40 00	25 40
Tasker & Clarke's Meat and Bone Compost,	25 00	12 60
Mapes' Nitrogenized Superphosphate,	50 00	14 60
Lodi Company's Poudrette,	2 pr bbl.	11 40
Peruvian Guano,	60 00	62 80
Government Peruvian Guano,	60 00	37 60
Pacific Ocean Guano,	50 00	45 60

Peruvian guano and the ground raw-bones are the only articles that stand the test. None of the others are worth what is charged for them. Rhodes' superphosphate comes nearest to the mark. Dr. PUGH says:

The greatest cheat in the whole lot is that of Mapes' so-called nitrogenized superphosphate. It is sold for nearly *three times as much as it is worth*, and when sold contains so much worthless matter that the cost of transporting the latter would very materially increase the cost of what little valuable material was obtained in it. The manufacture and sale of such a manure at such a price, implies either gross ignorance or dishonesty, and points out the necessity of our having some means of protecting the farmer from the shameful imposition that sales of such manures inflict. The sale of every 100 tons of such a manure annually would imply a loss of at least $3,500 per year to the farmer, to say nothing of the still greater loss of crops resulting from the use of such a worthless manure.

The Lodi Company's poudrette is sold by measure, and it is, therefore, not easy to determine its real value. The agent of the Company informs us that it weighs about 220 lbs. per barrel, say nine barrels in a ton. Dr. PUGH gives the price at $2 per barrel. This would be $18 per ton, while the real value is only $11.40. When seven barrels are taken, the price in New York is $1.50 per barrel, or $13.50 per ton. This, compared with many others, is not a very wide difference between the selling price and the estimated value; but it is a bulky article, and the freight, *in proportion to its value*, would be much higher than on Peruvian guano. The real question is: what is a manure worth, delivered on the farm, and what can it be obtained for—not in New York, *but on the farm.* A ton of ordinary barn-yard manure, according to the above estimate, is worth $2. But if it had to be transported any long distance, it would not be worth anything—the cost of freight would be more than the value of the manure. In estimating the value of poudrette, therefore, or any other bulky fertilizer, this cost of freight is a very important point.

In regard to MAPES' manures, little need be added to the remarks of Dr. PUGH. The Boston *Cultivator*, of April 12, in alluding to the above facts, says:

Some persons may remember that examinations made by Mr. HARRIS, of the *Genesee Farmer*, and Prof. S. W. JOHNSON, of Yale College, some years ago, of Mapes' superphosphate and other manures manufactured by him, presented similar discrepancies to the above, in regard to the selling price and calculated value.

This is true, and if farmers *will* waste their money in purchasing such worthless stuff, we can not help it. We have for years done all that we could to put them on their guard.

It will be seen even that Peruvian guano differs greatly in composition and value. One sample analyzed was worth $62.80 per ton, while another, selling at the same price, was worth only $37.60. The large dealers in England have the cargoes analyzed before purchasing, and this the only way of securing a good article.

The consumption of artificial fertilizers in this country is destined to be very large, and the agricultural press should fearlessly expose all attempts at imposition. Let it be distinctly understood that a good chemical analysis will show the real value of a manure with infallible accuracy, and let such men as Prof. S. W. JOHNSON and Dr. EVAN PUGH be encouraged to examine every commercial manure found in the market, and we shall soon be rid of the imposters who rob the farmers of their hard earnings. The honest and intelligent manufacturers and dealers should themselves use their influence in this direction. Let them have their manures analyzed, and then give a *guarantee* that such represents their real composition, and if such should not prove to be the case, they might be sued for damages.

A short time ago, a manufacturer of a new fertilizer in New York asked us to advertise and recommend his article. He had a number of testimonials from those who had used it, and was himself eloquent in its praise. "That is all very well," we remarked, "but all know how easy it is to get testimonials. Send a fair sample to Prof. S. W. JOHNSON, of Yale College, and if he finds 10 per cent. of ammonia in it, we will give you a good puff without charge." If the agricultural press will adopt a similar rule, manure dealers will soon understand that they can not impose upon farmers with impunity.

THE WHEAT CROP IN ENGLAND.

THE *Mark Lane Express* issued a circular, addressed to reliable parties in different parts of England, asking, "Is there a good breadth of wheat sown in your neighborhood?" and "Has it been put into the ground in good condition?"

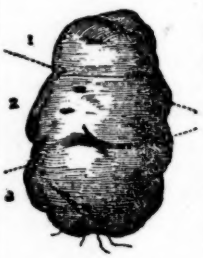
Two hundred and ninety-nine answers were received, from which it would appear that an unusual breadth of land has been sown to wheat, and that the plants on the whole look exceedingly well. The editor of the *Express* remarks:

Referring again to the tables, it will be seen that the breadth of land now under wheat is unusually large. This may be ascribed in a great measure to the small quantity that was sown during the previous year, from the unfit state of the land. Not only has a *very large* breadth been sown, but the seed has been put in under the most favorable circumstances. If, to some extent, rather too late (as a rule), yet the mildness of the winter has favored it, and the plant generally is strong, healthy, and without breaks in the rows. It would be needless to give any condensed table of this schedule, as, with the exception of about four or five cases, the whole of the returns agree in their accounts, both as to the largeness of the breadth and the wonderfully fine appearance of the plant. If no disaster intervene between now and harvest, there is the prospect of this important product yielding the largest amount of produce that ever was known."

CUTTING POTATOES—EARLY AND LATE CROPS.

WE have in previous volumes of the *Genesee Farmer* alluded to the fact that the rose end of the potato will start sooner and produce an earlier crop than the middle or heel of the potato.

The reason assigned for this by Dr. LINDLEY, was that the rose end was better matured. We thought that this could not be the true reason, from the fact that the rose end was the latest formed portion of the potato and could, therefore, hardly be supposed to be as well matured as the heel end, which was older. We thought the true explanation was, that before a seed could germinate it must be decomposed. "That which thou sowest is not quickened except it die." And the rose end being *less* matured—the elements being in a cruder form and less organized—the sets would decay sooner and the plants would start earlier.



1. Rose End. 2. Centre 3. Heel End.

Since these views were expressed—and which, if true, are of much practical and scientific importance—we have met with the following fact which seems to confirm them. Dr. FROMBERG has analyzed the different parts of four varieties of potatoes, and in each case he found that the rose end contained more *inorganic* matter and water than the heel end—in other words, it was less organized.

Prof. WILSON, in his recent work on "Our Farm Crops," in commenting on these results, says they "help to strengthen the claims which science has upon all engaged in farming pursuits, by giving them a solution of many apparently mysterious circumstances connected with their daily avoca-

tions. Now, to an observant man, this identified difference may be made serviceable in this way: with one tuber he has the means of raising three distinct plants—from the "rose end," from the "centre," and from the "heel sets"—each of which will come to maturity at a different period, the produce of the "set" from the "rose end" coming forward first, that of the centre being next, while the "set" cut from the "heel end" will require some two or three weeks longer before it is ready for harvesting. In cutting the sets for planting in districts where it is important that the crop should come to maturity at a given time, this lower portion should be separated from the others, and thrown aside for feeding purposes, only the upper and centre portions being retained for use as seed."

CULTIVATION OF THE WHITE BEAN.

For years we have earnestly advocated the more extensive cultivation of the white bean as a field crop on American farms.

The great need of American agriculture is a good "fallow crop"—some plant that will stand our hot, dry summers, enrich the soil, and allow the use of the horse-hoe to clean the land during its growth. A plant, in short, that shall occupy the same place in our rotation as the turnip does in English agriculture.

The white bean comes nearer to this than any other plant yet introduced. If the beans are consumed on the farm,—as the turnips always are in England—their cultivation would add materially to its fertility. There can be no doubt on this point. All the leguminous plants—including clover, peas, vetches, beans, etc.—contain large quantities of nitrogen, and this when consumed by animals or plowed under, is converted into ammonia—the very thing which we most need for the growth of the cereals.

Let us, then, grow beans. No crop will pay better. When prices are good, as at present, they can be sold; and if prices fall, they can be fed out on the farm with advantage.

In regard to their cultivation, we have written so much in previous volumes of the *Genesee Farmer*, that little need be added at this time. They are generally grown on warm, light soil, but will succeed on almost any soil if properly cultivated. For this, as for all other crops, the land should be well underdrained, either naturally or artificially. The land may be plowed in the fall and again in the spring, and made clean and mellow before planting; or a clover sod may be turned over and the beans planted at once. The common "white medium" is generally considered the most productive variety, but the White Mountain or Marrow yields nearly or quite as well, and brings a better price. It is a little larger, rounder, plumper and handsomer, and is gaining in popular esteem.

They may be planted in hills two and a half feet apart and fifteen to eighteen inches apart in the rows, dropping five to six beans in each hill; or they may be drilled in with a machine, in rows two and a half feet apart, and a single bean two inches apart in the rows. The latter, perhaps, gives the larger crop, but the former requires less labor in hoeing, etc. In this section, they are usually planted the first week in June.

CROSS BETWEEN THE WILD AND DOMESTIC GOOSE.

A correspondent of the *Prairie Farmer*, speaking of the hybrid between the wild and domestic goose, says they frequently "pair like other geese, and lay quite a number of eggs, yet their eggs will not hatch." He has tried them repeatedly, but the eggs were always rotten at the expiration of four

AMERICAN WILD GOOSE.

weeks—the period of incubation for both the wild and common goose. He says the mongrels yield more and better feathers, and can be picked oftener in a year than common geese; that they are larger than either of the parent stocks; that they are stronger and hardier than the common geese, smaller eaters, and more easily reared. In winter "they sit on the snow and ice and keep up their wild yells night and day." He gives the testimony of his wife, that the eggs of these mongrel geese "make better pan-cakes than any other eggs she has tried."

The editor of the *Boston Cultivator* calls attention to this fact, and says he has heard before that these mongrel geese sometimes lay, but never heard of an instance of their eggs having hatched.

C. N. Bement, in an article written for the *Rural Annual and Horticultural Directory* for 1859, mentions the same fact. Speaking of the American wild goose, he says:

"This bird, by all foreign writers, is called the Canada goose. Most writers on poultry call it a variety of the common goose; but it is no more a *variety* of goose than the swan, which it greatly resembles. Cuvier seems to doubt whether it is a goose at all, and says it can not properly be separated from the true swans. We once possessed a wild gander that had been pinioned by a shot in the wing, which mated with a common domestic goose, and we bred from them for more than ten years; *but their produce was not fruitful*, although they laid eggs. The hybrids never showed any disposition to pair or mate with either the wild or domestic goose. They partake largely of the wild habits, and if their wings are not clipped spring and fall (and more particularly the in spring), they are very apt to fly away and not return.

We annex an excellent portrait of the wild American goose.

CULTIVATION OF FLAX.

An unusual interest is felt at the present time, both in this country and Canada, in regard to the culture of flax.

That our soil and climate are well adapted to the growth of flax. there can be no doubt. Russia, with a climate in many respects similar to that of the United States, is the greatest flax producing country in the world. The only drawback we can perceive to its extensive culture is the high price of labor as compared with Russia and other great flax-growing countries. But, as the introduction of improved machinery has enabled our farmers to overcome this difficulty in the cultivation of other crops, we see no reason to doubt that such will be the case in the cultivation of flax and the preparation of the fibre for market.

Flax can be grown on a wide range of soils—from heavy clays down to those of a mucky character. Sandy loams in good condition and alluvial soils are best suited to its production. In Ireland, large crops are sometimes grown on peat-bog lands with a clay subsoil. A deep, open soil, either naturally or artificially underdrained, is very essential, as the fibrous roots ramify through the soil in all directions and not unfrequently to the depth of two or three feet.

Flax is supposed to be an exhausting crop. We do not think that this is especially the case. It likes a rich soil, however, and large crops can only be grown with good tilth and clean culture.

It is thought best to plow the land in the fall, and get it as clean and as fine as possible, and then to sow the seed in the spring without plowing—merely cultivating the land. One advantage claimed for this practice, is that the flax can be sown earlier in the spring.

If grown for fibre, early sowing is more important than if grown merely for seed. In this country, especially in Ohio, a large amount of flax is sown merely for the seed. When this is the case, it need not be sown before May, and the preparation of the land is not of so much importance. For either fibre or seed, it should not be sown till the land is in good working condition. Some prefer

FLAX PLANT AND ROOT.

to turn over a clover sod immediately before sowing In this way, the plants get the start of the weeds. In Belgium flax generally follows oats, and the land is seeded down with the flax. Sometimes carrots are sown with the flax.

If grown for fibre, thick seeding is necessary. Two bushels of seed per acre is the usual quantity. In Europe it is generally drilled in, and the crop is afterward carefully weeded. In this country it is generally sown broadcast. It is essential to cover the seed at an even depth, as uniformity in the ripening of the crop is important.

When sown merely for the seed, much thinner seeding is required. From three pecks to a bushel per acre is ample.

THE JERUSALEM ARTICHOKE.

A FEW years ago the agricultural papers teemed with the most extravagant recommendations of this plant. It would grow anywhere and everywhere, required no cultivation, produced enormously, and added greatly to the fertility of the soil. ALLEN'S "American Farm Book" stated that it would yield *two thousand bushels* of tubers per acre, and from four to five tons of dry tops, equal to the best hay!

Many farmers were induced to plant it. It need hardly be said that the result was not equal to

COMMON ARTICHOKE.—(FIG. 1.)

their anticipations. Those who had praised it so immoderately, were justly censured, and its cultivation was soon all but generally abandoned.

This result is much to be regretted. The plant has many qualities to recommend it. Like the parsnep, the tubers can remain in the soil all winter without injury. It will grow on poor sandy soil, and yield a large amount of produce. It draws most of its nourishment from the atmosphere, and its growth and consumption on the farm adds largely to its fertility. It is extensively grown on many of the poor sandy soils of Europe. BOUSSINGAULT, several years ago said, "Of all the plants that engage the husbandman, the Jerusalem artichoke is that which produces the most at the least expense of manure and of manual labor." The French agricultural writers of the present time speak of it as one of the best renovating plants that can be grown on a farm.

The cultivation of the Jerusalem artichoke the first year is very similar to that of the potato. When once in the soil, however, no further planting is required. There will always be tubers enough left in the soil for the next crop. It is impossible to get them out. This is one of the objections to the plant as an ordinary farm crop.

YELLOW ARTICHOKE.—(FIG. 2.)

The usual plan is to select a piece of ground—generally some spot that can not be profitably cultivated with anything else—and plant it with artichokes and let them occupy it for a number of years. The tubers should be planted in rows three feet apart, and twenty inches in the rows. The next season there will be enough tubers left in the ground for a crop. They may be thinned out by running a plow or cultivator through them. This is all the cultivation required.

In France, it is not uncommon to feed off the tops with sheep in the fall. In this country, this may be done, and the pigs afterward may be allowed to root up the tubers. We can not but think that there are many places on American farms where the Jerusalem artichoke may be raised to considerable advantage.

There are two varieties of the Jerusalem artichoke in cultivation. Fig. 1 is the more common kind. Fig. 2 is the Yellow variety, and is usually smaller and more irregular in shape. The latter is the best for garden culture, being of a more agreeable flavor when cooked for the table.

LICE ON CALVES.—Feed them well; keep their pens clean and well littered with fresh straw, and they will seldom be troubled with lice. A little sulphur in their milk is also good. If they are affected, Scotch snuff or a solution of tobacco will kill the lice.

SHEARING SHEEP.

An Ohio correspondent asks for an article on this subject. We should much prefer to shear a dozen sheep than to attempt a description of the operation.

(FIG. 1.)—THE FIRST STAGE OF CLIPPING A SHEEP.

It is a matter of surprise to us that so few farmers know how to shear sheep. The operation is not a difficult one. Every farmer's son should learn as soon as he is old enough. When a boy, it was our delight to assist the shearers—to catch the sheep, turn them up, and shear the wool from the belly, etc. And by-and-by we could make further progress, and finally could go through the whole operation. The work can not be expected to be done perfectly at first, but no farmer should hesitate to let his son learn, even if he does not turn out the sheep at first as smoothly and handsomely as could be desired.

Stevens, in his "Book of the Farm," gives a minute description of the operation accompanied with illustrations, which we have had engraved for the *Genesee Farmer*. He says:

Clipping consists of three stages, the first of which is represented in fig. 1. After setting the sheep on its rump, and on the supposition that the clipper is a right-handed man, he rests on his right knee, and leans the back of the sheep against his left leg *a*, bent. Taking the shears in his right hand, and holding up the sheep's mouth with his left, he first clips the short wool on the front of the neck, and then passes down the throat and breast between the fore legs to the belly. Then placing the fore legs *b* under his left arm *c*, he shears the belly across from side to side down to the groins. In passing down the belly and groin, where the skin is naturally loose, while the shears *d* are at work, the palm of the left hand *e* pulls the skin tight. The scrotum *f* is then bared, then the inside of the thighs *g g*, and lastly, the sides of the tail *h*. These are all the parts that are reached in this position. For the clipping of these parts small shears suffice; and as the wool there is short and of a detached character, it is best clipped by the points of the shears, as carefully held close like *d*.

Fig. 2 represents the *second* stage of clipping. Its position for the sheep is gained by first relieving its fore legs *b* from their position in figure 1, and gently turning the sheep upon its far side, while he himself, resting on both knees, supports its far shoulder upon his lap. You

(FIG. 2.)—THE SECOND STAGE OF CLIPPING A SHEEP.

may always rely upon this fact—the more a sheep feels at ease, the more readily it will lie quiet to be clipped. Supporting its head with his left hand the clipper first removes the wool from behind the head, then around the entire back of the neck to the shoulder top. He then slips its head and neck *a* under his left arm *g*, and thus having his left hand at liberty, he keeps the skin tight with it, while he clips the wool with the right from where the clipping in the first position, fig. 1, was left off to the back bone, all the way down the near side. In fig. 2 the fleece appears to be removed about half way down the carcass; the left hand *b* lying flat, keeping the skin tight; while the right hand *e* holds the shears at the right part, and in the proper position. The clipper thus proceeds to the thigh and the rump and the tail *d*, which he entirely bares at this time.

Clearing the sheet of the loose parts of the fleece, the clipper, holding by the head, lays over the sheep on its clipped or near side, while still continuing on his knees; and he then rests his right knee, fig. 3, over its neck on the ground, and his right foot *b* on its toes, the ankle keeping the sheep's head down to the ground. This is the *third* position in clipping. The wool having been bared to the shoulder in the second position, the clipper has now nothing to do but to commence where it was then left off, and to clear the fleece from the far side from the back bone, where it was left off in fig. 2, in the second position, toward the belly, where the clipping was left off in the first position, fig. 1—the left hand *e* being still at liberty to keep the skin tight, while the right hand *f* uses the shears across the whole side of the tail. The fleece *g* is now quite freed from the sheep. In assisting the sheep to rise, care should be taken that its feet are free from entanglement with the fleece, otherwise, in its eagerness to escape from the unusual treatment it has just received, it will tear the fleece to pieces.*

On comparing the attitudes of the clipper and of the sheep, in the different stages of clipping just described, with those of a mode very common in the country, it is necessary to look again at the *first* stage of the process, fig. 1. the common practice of conducting which is to place the sheep upright on its tail, and the clipper to stand on his feet, supporting its back against his legs—which is both an insecure and painful position for the sheep, and an irksome one for the man, who has to bow much down to clip the lower part of the animal. In the *second* stage, fig. 2, the man still remains on his feet, and the sheep upon its rump, while he secures its head between his legs, in order to tighten the skin of the near side, which is bent outward by his knees. The skin is certainly tightened, but at the expense of the personal ease of the animal;

(FIG. 3.)—THE THIRD AND LAST STAGE OF CLIPPING A SHEEP.

for the hand can tighten the skin as well, as shown in all the figures, at *b* and *e*; whilst the bowing down so low, and as long, until he clips the entire side, can not fail to pain the back of the clipper. The third position is nearly the same in both plans, with the difference in the common one, which keeps the left leg bent, resting on its foot—a much more irksome position than kneeiing on both knees.

SKIMMED MILK CHEESE.—A skillful dairymaid can make very fair cheese from skimmed milk. But extra care and time are reqnired. The cheese must be set very cool, or it will be sour and unpalatable—

"Too big to swallow, and too hard to bite."

It was an article of this kind which elicited a rather pithy criticism from a half-witted fellow who got his living by running errands about Dunblane, in Scotland. On one occasion he was sent to a farm-house where the "creaming-dish" was very rigorously used, and on being set down to a repast composed of bread, butter and cheese, he was observed to spread the butter pretty thickly over slices of cheese, muttering all the while, quite loud enough to be heard by the bystanders, "Deil be in their fingers that ever pairted ye."

*The artist has erroneously represented the sheep lying on its *far* side, and the clipping to proceed from the belly to the back bone, which is the proper posture for the second position, as also the keeping of the sheep's head down with the left leg *a*, whereas the sheep should have lain upon its *near* side, the wool been shorn from the back bone to the belly, and the head kept down with the right leg, as described above.

SPIRIT OF THE AGRICULTURAL PRESS.

HOG CHOLERA.—The *Illinois Farmer* says: "We have never heard of a farmer losing his hogs by this disease who kept them in good clover pasture during the summer."

BRAN AS A MANURE.—A correspondent of the *New England Farmer* used bran as a manure for potatoes. The result satisfied him that the advice of his better-half was correct, "that he had better give the bran to to the cows and let them compost it before using it for manure." We agree with his "better half."

SQUASHES FOR MILCH COWS.—A correspondent of the *Valley Farmer* says summer squashes are excellent for feeding cows in summer. They are easily raised, very productive, and continue bearing till frost. They are nutritious, and cows eat them with avidity. He thinks the Yellow Bush Summer Crookneck the best variety.

DON'T BE AFRAID OF SEED.—The *Ohio Farmer* says: "As a rule, farmers in this country use too little seed; the ground must and will be occupied, and if the seed you desire to grow be not there, weeds, etc., will take its place. Some good farmers have learned this by experience. Put in plenty of seed, and that of the very best kind."

BAD SEED AND THE MANGEL WURZEL CROP.—The *Mark Lane Express* furnishes an interesting table of statistics in regard to the crops of last year in England. Out of 380 returns, 237 report the crop of mangel wurzel as poor. This is ascribed to the ungenial season of 1860, which prevented the seed from properly ripening. A large proportion of it rotted in the ground. The loss sustained by farmers—and the country—from poor seed is enormous.

THE POTATO DISEASE.—J. B. AUSTINE, of Warren, Mass., writes to the *Boston Cultivator*, that five years close observation and experience in regard to the potato disease, prove conclusively, to his mind, that the best remedy consists in separating the tops from the tubers as soon as the former show any evidence of disease or blight. This is done by carefully pulling the tops, the workman placing his feet around them so as to prevent the tubers from being drawn out.

EFFECTS OF VEGETABLES UPON DIFFERENT ANIMALS.—The *Scottish Farmer* says: "Horses seldom eat cruciferous plants (cabbages, turnips, etc.), but will feed on reed grasses, amidst abundance of which goats have been known to starve; and these latter again will eat and grow fat on the water hemlock, which is rank poison to other cattle. In like manner, pigs will feed on henbane, while they are destroyed by common pepper; and the horse which avoids the bland turnip will grow fat on rhubarb."

WATER-PROOF BOOT SOLES.—The New York *Tribune* says: "If hot tar is applied to boot soles, it will make them water-proof. Let it be as hot as the leather will bear without injury, applying it with a swab and drying it in by fire heat. The operation may be repeated two or three times during winter, if necessary. It makes the surface of the leather quite hard, so that it wears longer, as well as keeps out the water. Oil or grease softens the sole and does not do much good in keeping the water out. It is a good plan to provide boots for winter during summer, and prepare the soles by tarring, as they will then become, before they are wanted to wear, almost as firm as horn, and will wear twice as long as those unprepared."

CORN COBS.—The New York *Observer* says truly, "cobs are not worth the crushing." The cost of grinding them with the grain is more than they are worth as food.

MELONS.—A correspondent of the *Valley Farmer* urges every reader of that paper to plant at least melons enough to save the boys from breaking the eighth commandment! A dozen hills will be sufficient for an ordinary family.

FENCE POSTS.—The *Ohio Farmer* says: "Many years ago, we were building a new fence, and when setting our posts, we saturated that part which we placed in the ground, and about one foot above, with coal tar, rosin and lime. The proportions were about eight parts of tar to one of lime; and sixteen of tar to one of rosin. We melted the rosin before mixing, but the lime we put in as we bought it from the kiln. Those posts are now nearly all of them sound and good, although the timber was a sorry mixture of basswood, beech, oak, chestnut and maple."

WHY DO WE PICKLE SEED WHEAT TO PREVENT SMUT?—A correspondent of the Iowa *Homestead* says:

Smut is said to be prevented by soaking the wheat in a solution of salt, or in a solution of nitre, or in a solution of blue vitrol, each of which is undoubtedly good. Why? Because, acting as fertilizers, they give vigor to the growth of the wheat—accelerating its growth, and thus enabling it to resist the early and pernicious influences of too much heat, or too much moisture.

This is not the reason. These substances do not accelerate the growth of the wheat. They do not act as fertilizers. In fact, wheat that is "pickled" with salt or chamber lye, and dried with lime—the most common mode of treating seed wheat to prevent smut—seldom starts so early or grows so vigorously at first as that which is not pickled.

The reason why these substances prevent smut is this: The spores of the smut, or, more properly, "bunt," adhere to the seed wheat, and, if not destroyed, propagate rapidly under favorable circumstances, and are in some way carried into the circulation of the plant and injure the crop. We pickle the wheat in order to destroy them.

GALLED SHOULDERS IN HORSES.—A correspondent of the Germantown *Telegraph* writes: "Some say that if a collar fits a horse as it should, he will never have sore shoulders. Now, I do not think that this is the case, for I have a pair of horses who could not be worked at plowing or harrowing for a week, without having sore shoulders, yet their collars fitted them well. It seemed that one hide had to be rubbed, and as that of the collar was the hardest, the consequence was that the horses' hide got the rubbing. The galls I could soon cure, but if the horses were worked I could not prevent them. Chancing one day to take hold of an English agricultural journal, the first thing which I noticed was an editorial proposing that a piece of leather should be laid on the horse's neck under and disconnected from the collar. I saw that the theory was good, and concluded that as one hide had to take a

rubbing, the collar and leather might settle it between them as best they could. So having procured paper and scissors, I cut out a pattern for my havelock. I cut the pattern so that it could be sewed together on top of the neck and in front of the breast, and at the same time fit the neck neatly without creasing. They were made considerably wider than the collar, say from ten inches to one foot. I then applied my patterns to a piece of leather, and cut out their counterparts, and sewed them together, and after soaking them over night I applied them to the horses' necks, taking care to keep them smooth and nice. Since then my horses have never had sore shoulders; and any one seeing the havelocks after three months use would not wonder that the horses' shoulders were sore, or rather would wonder that all horses' shoulders were not sore.

"I have cured the shoulders of horses with the following compound: *Good* brandy, 1 quart; ½ lb. alum well powdered. The brandy and alum should be placed in a bottle, and when used should be well shaken. The mixture should be rubbed on with a sponge, and a pad (an old stocking leg stuffed with straw) should be placed below the gall, and I will insure a cure if the collar is as soft as it should be. I have cured shoulders with this mixture, even when the skin was broken, without taking the horse from his work. But use the havelocks, and you won't want the mixture."

MANAGEMENT OF HONEY BEES.

I now propose to make a few remarks on the Langstroth Movable Comb Hive, in regard to which a good deal has been published in the agricultural papers. I do this, as I write all other matter here, for the benefit of the readers of the *Genesee Farmer*. If others think differently from what I shall say, it is only what takes place on all subjects. There is not, probably, a single article that appears in this paper in a year, which does not evince a disagreement in opinion with many of its readers.

In the Langstroth hive, each comb is attached to a separate moveable frame, which may be removed at the pleasure of the apiarian. It is alleged that the advantages of such combs are: that weak stocks may be quickly strengthened by supplying them with maturing broods from stronger ones; queenless colonies provided with the means of obtaining another queen, and the ravages of the moth prevented by the removal of combs, and the moth worms destroyed. It is also said that new colonies may be formed with this hive in a very expeditious manner, and the surplus honey taken from the combs. I quote Mr. LANGSTROTH's own words. He says: "Colonies may be safely transferred from any other hive to this, at any season of the year from April to October, as the brood combs, honey and all the contents of the hive are transferred with them, and securely fastened to the frames."

Here we have about all the alleged benefits that are claimed for this hive.

In the first place, the hive costs considerable more than most other hives. It was said, when they first came out, that they could be constructed for about $4, and Mr. LANGSTROTH has since stated that the price has been reduced in some measure. The price, however, would not be objected to, if such hives were really necessary in order to obtain the greatest degree of success in bee culture.

But a serious difficulty in the way of the successful working of this hive, exists in the frames becoming glued fast to the sides of the hives by the bees; it being natural for them to close up every crack and crevice with propolis. When this occurs, and it is frequent, all the alleged advantages are unavailable. Even if these obstructions did not occur, it is very doubtful, in my mind, whether the extra time spent in performing operations, with the extra cost of hives, will "pay" in the end.

If I had a weak colony of bees, I would sooner strengthen it by *transposition* with a stronger family, than by the movable comb system.

In regard to *queenless* colonies: when discovered, which is known by the inactivity of the bees, very few of such families are sufficiently populous to recover on being supplied with brood comb, from which another queen may be reared. In most cases, the first intimation we have of a family having lost its queen, is the *desertion of the hive;* the bees having made a forced entrance into the adjoining hives. This occurs generally in the spring of the year, on the first, few mild, sunny days that take place—more queens being lost in winter than in any other season. I, therefore, consider the facilities offered in the Langstroth hive for supplying larvæ to queenless hives, as worth but very little in a practical point of view.

The alleged benefits in affording an opportunity to destroy the bee moths in the combs, I consider wholly worthless, because no strong family of bees was ever known to become badly infested with moths, and when a weak one was in such a condition that it is necessary to remove the combs and cut out the worms, it is scarcely in a savable condition—the moths having got the upper hand, and the bees so reduced in numbers as to be of little value.

Mr. LANGSTROTH, I believe, lays considerable stress on the alleged advantages of his hive to form new colonies—to make artificial swarms.

A very attractive *theory* can be written out on this basis, but when we come to *practice* on it, we find a very different matter. I have tried artificial swarming, by attaching brood comb in a hive, and then forcing bees to occupy it, which is Mr. LANGSTROTH's system, without his hive, and I have become convinced that *natural* swarming is the most advantageous. The chief disadvantages of this plan are: the bees do not work with the same activity as when swarmed naturally, and considerable time is lost in rearing a queen. This artificial swarm theory is an old one—one that was exploded long before Mr. LANGSTROTH invented his hive. In some cases, where the season is favorable, artificial swarms made *early* will do well; but, as a general rule, it is not destined to be followed by the bee keepers of the United States.

In my remarks I refer more particularly to the interests of those who are compelled to count the cost in all they do. Any person who has leisure, time and money to spare, may very properly use the Langstroth hive, if for nothing more than as a matter of amusement. But for farmers, who can not spare time to "fuss" with movable bars, and supply brood to a queenless family, I think I am correct when I say *it will not pay.*

T. B. MINER.

Clinton, N. Y.

HOW TO PRESERVE EGGS.

As the season approaches when hens are most prolific of eggs, and eggs are plenty and low in price, is the best time to preserve them for future use—when they are scarce and dear. We offer the following receipts for the benefit of the readers of the *Genesee Farmer*; several of which we have repeatedly tried with perfect success, and found the eggs, after one year's packing, perfectly sound and fit for eating and all culinary purposes.

Nothing was known scientifically on the subject of preserving eggs till M. REAUMUR was led to take it up. Eggs, after being laid, it was shown, lost daily by transpiration a portion of the matter which they contain, notwithstanding the compact texture of their shell and of the close tissue of the flexible membrane lining the shell and enveloping the white. When an egg is fresh, it is proverbially full, without any vacancy: and this is a matter of common observation, whether it be broken raw, or when it is either soft or hard boiled. But in all stale eggs, on the contrary, there is always more or less vacancy, in proportion to the loss they have sustained by transpiration; and hence, in order to judge of the freshness of an egg, it is usual to hold it up to the light, when the translucency of the shell makes it appear whether or not there be any vacancy in the upper portion, as well as whether the yolk and white are mingled and turbid by the rotting and bursting of their enveloping membranes.

The transpiration of eggs, besides, is proportioned to the temperature in which they may be placed—cold retarding and heat promoting the process. Hence, by keeping a fresh laid egg in a cool, dry cellar, of even temperature, they will transpire less and be preserved for a longer period sound, than if they are kept in a warm place or exposed to the sun's light, which has also a great effect in promoting the exhalation of moisture. As, therefore, fermentation and putridity can only take place by communication with the air at a moderate temperature, some means must be devised to exclude such connection by closing the pores of the shell.

Thd first material which M. REAUMUR tried was alcohol varnish, made with shellac, and he says that "it was impossible to distinguish the varnished eggs, which had been kept for a year, from those newly laid."

It is an indispensable condition of the material used for stopping the pores of the shell of the egg, that it should not be capable of being dissolved by the moisture transpired from the interior, and the varnish fulfilled this condition. But unfortunately, though varnish is not very expensive, it is not a common article in country places where eggs are most abundantly produced, while many people, besides, are not easily brought to make use of anything to which they have not been accustomed.

In order to get over this difficulty, M. REAUMUR was led to try other substances, and soon found another material, very cheap and everywhere to be had, which would very well supply the place of varnish. The material was fat or grease, such as suet or lard. But the best of these was proved to be a mixture of mutton and beef suet, melted together over a slow fire, and strained through a linen cloth into an earthenware pan. When thoroughly melted, an egg was dipped into it, and immediately taken out again, when it was in a fit state to be kept for months or more. Five lbs. of this fat melted might prepare all the eggs produced in the neighborhood in one season.

"The chief advantage in the use of this fat, rather than varnish, is that the eggs rubbed over will boil as quickly as if nothing had been done to them—the fat melting off as soon as they touch the hot water; whereas the varnish, not being soluble even in hot water, only becomes moistened by it, and still hanging about the egg, prevents the transpiration of the juices necessary to bring the egg into that state in which it is to be eaten. When the egg, on the other hand, which has been preserved by the fat, is taken out of the water there remains but little fat upon it, and what there is can easily be wiped off upon a napkin."

The method of preserving eggs by means of fat is greatly preferable to that of varnish, when they are intended for putting under a hen to be hatched, for the fat easily melts away by the heat of the body of the hen, while the varnish remains and impedes the hatching. It is safer, however, to immerse the eggs in hot water not exceeding 100°, and then wipe them carefully with flannel or soft woolen cloth. By this means, and carefully packed in dry sawdust, oats, or almost any other dry, soft substance, if fresh laid, eggs may be carried to a distance and hatched.

In the meanwhile air should be excluded from the eggs as much as possible. It is best to set them on end, and not to suffer them to lie and roll on their sides. Dry sand or hard-wood sawdust is the best for packing. When choice eggs are expected, it is more prudent to have a hen waiting for them, than to let them wait for her. A good sitter may be amused with a few addled or glass eggs, and so be ready to take charge of those of value immediately on their arrival.

There is another method of preserving eggs a long while fresh, depending on very different principles from the preceding, but well worth notice. We are indebted for the discovery, if indeed it can be termed one, to the same ingenious French experimenter, M. REAUMUR. Having remarked that there was a very great difference among eggs as to the rapidity with which they become unfit for use and putrid, he investigated the cause of this difference, and found that it was the eggs which had not been fecundated or made reproductive by the cock that continue long uncorrupted. In order, therefore, to have eggs to keep fresh from spring to the middle or even the end of winter, it is only necessary to remove the cocks and to deprive the hens of all communication with them for at least a month before the eggs are put away. Without knowing this, people often find among the eggs they buy some which soon spoil and others that will keep for a long time.

Some hens produce eggs with much thicker shells than others. These of course will keep longer than those with thin shells. The eggs from Guinea hens are the hardest, and will keep longer and bear transportation better than any others.

Eggs may be kept any length of time, if the air is perfectly excluded, turned often, and the place of deposit kept at a low temperature. We have

tried many experiments to preserve eggs, and have been most successful with lime water. We place the eggs carefully in stone jars in layers, with the small end downward, and then turn on them strong lime water, in which we dissolve two handsful of salt to four gallons of water. If, after standing a few days, a scum or crust should form on the top, we add more water and salt to dilute it, for if too strong it will injure and sometimes spoil the eggs. The jar should be kept in a cool and dry situation. In this way we have kept them good for more than a year. The lime and salt closes the pores of the shell, and the liquid secures them from atmospheric influences.

We have also preserved eggs by packing them as above in fine salt. They kept very well, but we found the salt, after a few months, packed so tight around the eggs that it was difficult to remove them without breaking the shells.

Eggs for preservation should be removed from the nest daily, and then laid down as fresh as possible. One bad egg may spoil or contaminate dozens or a jar full.

Another excellent method, as we are informed, for preserving eggs, is to mix a bushel of quick lime, two lbs. of salt and half a lb. of cream tartar together, adding a sufficient quantity of water, so that an egg may be plunged in to the point. When a paste has been made of this consistence, the eggs are put into it, and may be kept fresh, it is said, for two years.

"It ought not to be overlooked," says Dixon, "with respect to the preservation of eggs, that they not only spoil by transpiration of their moisture and the putrid fermentation of their contents, in consequence of air penetrating through the pores of the shell, but also by being moved about and jostled when carried by sea or land. Any sort of rough motion, indeed, ruptures the membranes which keep the white, the yolk, and the germ of the chick in their appropriate places, and, upon these becoming mixed, putrifaction is promoted.

"The dealers are reported to have recently discovered that immersing eggs in sulphuric acid is a very effectual means of preservation, and it is very probable it is so, for the sulphuric acid will act chemically upon the carbonate of lime in the shell, by setting free the carbonic acid gas, while it unites with the lime and forms sulphate of lime, or plaster of Paris. The pores of the shell will in this way be closed up with plaster of Paris, and in a more minute and effectual way, too, than could be done by its direct application."

Another method to preserve eggs in a fresh state, is to dip them in a solution of gum Arabic, and then pack them in powdered charcoal. The gum Arabic answers the purpose of a varnish for the eggs much better than any resinous gum, as it can be easily removed by washing either in warm or cold water, besides it is much cheaper. Eggs preserved in this manner will keep any length of time. as the bed of charcoal, from its porous nature, is a non-conductor of heat, and consequently maintains around the eggs a uniform temperature—preventing them from suffering from alternations of heat and cold, when they are removed from one climate to another. This method is said to be infinitely better than greasing them, for when the grease becomes rancid it hastens or promotes putrifaction of the animal matter in the egg.

The gum Arabic may be applied as follows:—Take equal quantities of gum Arabic and water; when the gum is dissolved, coat the egg with a soft brush. When this coating is dry, add another coat, and the eggs will keep fresh till wanted.

A German chemist has discovered an easy mode of preserving for six years, or probably for a longer period, eggs perfectly fresh and fit to eat. All that is necessary is to put fresh-laid eggs into a bottle with a large mouth and short neck, and fill it with lime-water.

The way to make lime-water is as follows:—Throw into a vessel containing ten or fifteen quarts of water, five or six lbs. of unslaked lime, shake it well several times, then let the lime settle and pour off the water, which is perfectly limpid, although it has dissolved a portion of the lime. To make sure of its being saturated with the lime, after having filled the bottle containing the eggs until the water is about three inches above them, add a small quantity of quick-lime and close the bottle.

Pickled Eggs.—At the season of the year when eggs are plentiful, boil some five or six dozen in a capacious saucepan until they become quite hard. Then, after carefully removing the shells, lay them in large-mouth jars and pour over them scalding vinegar, well seasoned with whole peppers, alspice, a few cloves of garlic, and a few races of ginger. When cold bung them up closely, and in a month they are fit for use. When eggs are plentiful, the above pickles are by no means expensive.

66 *East 29th street, New York.* C. N. BEMENT.

BUTTER MAKING IN IRELAND.

The *Irish Farmers' Gazette*, one of the very best of our foreign exchanges, contains an interesting article on the management of the dairy. We extract some remarks on butter making, which will be read with interest:

'Supposing the cows to be all milked—and this must be thoroughly done, for the last milk which can be drawn from the udder is the richest—then the milk is poured through a milk sieve into the dishes, so as not to be more than two inches in depth; at the same time, four to six inches is more common. Cream will not rise when there is a considerable depth of milk placed in the dish, and some people do not allow it to exceed one inch. It also rises sooner in warm weather than in cold, and for this reason it must be skimmed sooner when the weather is warmer than usual. In ordinary cases, the cream should be skimmed about 20 to 24 hours after the milk has been put into the dish; in warm weather taking it off somewhat sooner, and allowing it to remain a little longer in cold weather. As the cream is skimmed, it is put into an earthenware jar, the top of which is covered with a piece of muslin, in order to prevent flies or dust getting into the cream, whilst it admits air. As additions of cream are made to that in the jar, the whole should be thoroughly stirred and intermixed together, and the contents should not be allowed to remain longer than three or four days without being churned.

When the whole milk is churned, it is strained,

as milked, into milk dishes or coolers; but a greater quantity is put into each dish than is done when the cream is to be taken off. In the north of Ireland, where churning the whole milk is a prevalent practice, the milk is strained into a jar or "crock," successive milkings being added until the jar is full, but avoiding putting in new milk just before churning; that is, suppose churning takes place in the course of the forenoon, the morning's milk is not added to the contents of the crock which are to be churned, but put into a fresh crock, and becomes the beginning of another gathering. This system, however is not so good as keeping each milking by itself so that the warm and cold milk is not mixed together. The frequency of the churning will partly depend on the weather, but the whole milk ought not to be allowed to remain longer than three days in ordinary cases, or, perhaps, four, without being churned; and, in warm weather, it may be churned in two days from the time the first of it was taken from the cows.

In large and even moderate-sized dairies the churns are driven by power, which is preferable to manual labor. Hot water is often added to milk or cream, to bring it up to the proper temperature for churning—say 52° or 53°; but this is not a good practice, and where an increase in the temperature is necessary, it is better to acquire it by putting the churn containing the milk or cream into a tub filled with a sufficient quantity of water to bring the contents to a proper state. During the process of churning, the temperature will rise to 56° or 58°; but it is requisite that attention be paid, so that it may not rise much higher than that point, otherwise the butter will be injured. When whole milk is churned, it will stand, however, a higher temperature than cream. Rapid churning is not desirable, and over churning is equally bad; but the best medium will be found when it takes an hour and a quarter of steady churning, in ordinary weather, to produce butter.

There is a difference of opinion as to the best mode of handling butter after it is taken from the churn. Some put it into a small, flat tub, and wash the buttermilk out of it by kneading it among clear, cold spring water, the milky water being occasionally poured off, and fresh supplies added, until it ceases to become tinged with milk; others knead it and beat it in a clean cloth, which absorbs the butter milk, and is frequently wrung dry, until the buttermilk is entirely taken away; whilst a third set of butter makers say that it ought to be worked by means of a wooden skimming dish, and that to work it in any degree by the hand is to spoil it, from the heat and perspiration, which is said to render the butter waxy. Mr. BALLANTINE'S method, as detailed in the prize report in the "Transactions of the Highland Society," was to extract the milk by working it with the cool hand, but the butter itself was not washed or worked in water. Mr. DILLON CROKER, who paid great attention to the management of butter, recommended that, after finishing the churning, the milk should be drawn off by a plug from the bottom of the churn, and replaced by a quantity of pure spring water. A few turns of the wheel is then given, and the water run off; this is to be repeated until the water appears as clean as when it is put into the churn, showing that the milk has been all extracted. A strong pickle, well strained, is now put on the butter, and several turns of the paddles given, so that every part will feel the effect, which finishes the operation. If the weather should prove warm, it will be advisable, he considered, to let the butter lie in the churn for a few hours, which will render it firmer than it was when the washing was finished.

The salting process should commence directly after the buttermilk has been all extracted from the butter, and the quantity of salt must be regulated by the purpose for which the butter is intended. When it is to be sold merely powdered, a quarter of an ounce of salt wtll be sufficient for a pound of butter. For ordinary keeping purposes, or the London market, it may be cured with half an ounce of salt to the pound of butter, and many add quarter of an ounce of yellow sugar, and one-eighth of an ounce of powdered nitre. For export to the colonies, or long keeping, more salt is necessary, and as much as one ounce of salt, with a proportionate quantity of sugar, and the foregoing quantity of nitre, will be required. Nitre and sugar are both omitted by many, but these ingredients assist in flavoring and preserving the butter.

The salt used must be of the purest description, free from the salts of lime and magnesia which exist in ordinary sea salt. Prof. JOHNSTON recommended the purification of common salt for dairy purposes "by pouring two quarts of boiling water upon one stone or two of salt; stirring the whole well about, now and then for a couple of hours, and afterward straining it through a clean cloth. The water which runs through is a saturated solution of salt, and contains all the impurities, but may be used for common culinary purposes, or may be mixed with the food of cattle. The salt which remains in the cloth is free from the soluble salts of lime and magnesia, and may be hung up in a cloth till it is dry enough to be used for mixing with the butter, or with cheese."

The salt must be rendered as fine as possible, which may be done by crushing it with a rolling-pin, and the nitre and sugar well mixed with the salt, when these ingredients are used along with it. In salting, the butter is spread out thin in the tub, and the salt, etc., carefully sprinkled over it, and worked in with "the heel of the hand," until the whole is uniformly and thoroughly intermixed. Some only work in half the salt at first, and then lay the butter aside until next day, when the remainder is added, after pouring off any brine which has come from the butter. A great deal of Irish butter is spoilt by over-salting.

When the salting process is completed, the butter is packed into "crocks"—earthenware jars—or into small casks. The former answers well enough when the butter is intended for home use, but when it is to be sent by rail or steamboat, it should be packed in firkins. These are made of ash or oak, and previous to being filled with butter, they must be first filled with boiling water, which will be allowed to remain in them for 20 or 24 hours; they are then well rinsed in clean, cold water, and filled with a strong hot pickle, which may remain in them till they are required for use. The firkins are weighed before the butter is put in, and half a pound being allowed for any additional soakage

that may take place, the weight of the firkin is branded upon it. A little fine salt is then sprinkled in the bottom, and the butter packed tightly with a wooden rammer, or with the knuckles, and the greatest attention must be paid to this operation, so that there shall not be any vacant point left, as the air contained in that vacant place, no matter how small, would soon spoil the butter.

If the firkin or jar is not filled at one churning, the butter must be covered with pickle, or some salt sprinkled over it, and a clean cloth pressed close upon it, to keep out the air, until the next churning is ready, when the pickle is poured off, or the salt carefully removed with a spoon, and the smooth surface roughened or raised into furrows, for the purpose of allowing the last packed butter to become perfectly united with the first, without any appearance of seam, which would be the case were this precaution neglected. When the firkin or jar is filled, a little salt is strewed on the surface, and a piece of linen, dipped in strong salt and water, is spread equally over the top, when the cask may be headed, and is then ready for market, to which it should be sent with as little delay as possible.

Butter which has been improperly packed, or otherwise affected by the air, becomes rancid; but this may be cured by beating it in water into which from twelve to fifteen drops of chloride of lime to the pound of butter have been added. After working it well, leave it lying in the water for two hours, and then wash it in pure cold water, when it will be found to have become sweetened.

CULTIVATION OF CARROTS.

Eds. Gen. Farmer:—Noticing in both the March and April numbers of your paper, a communication in reference to the cultivation of carrots and other root crops, and disagreeing with both your correspondents in some respects, I should like to give them the benefit of my limited experience through your valuable paper.

Of the value of the carrot, in comparison with other roots, enough has already been said—and you will hardly find any two persons who exactly agree in this respect, and as to the proper quantity to be fed. Carrots are undoubtedly the best of all roots for horses, but for horned cattle and hogs I greatly prefer the mangel wurzel beet. As far as my experience goes, cows will give more milk and better quality, and both fat and working cattle will thrive better on mangels than on either carrots or turnips.

The best soil for carrots is a light, rich loam, but they will grow on any soil if properly prepared. I have raised them upward of thirty inches long on low, damp ground, when deeply subsoiled.

The yield of the carrot crop depends entirely on the preparation and tillage. The ground should be well manured—not less than twenty ox-cart loads per acre, and thirty or forty would be better. I have used raw manure with as good results as when well rotted. Plow thoroughly, incorporating the manure with the soil, and follow the first plow with a good, stirring subsoil plow. *Do not be afraid of getting too deep.* Harrow level and roll *lightly* before planting. For this purpose, I use a combined harrow and roller,—a one-horse machine—with which in three hours I can prepare half an acre of rough plowed ground for the seed drill, thereby saving all the expense of harrowing and raking the ground as it is usually done.

As to the time for planting carrots, I do not agree with "O. R." in the March number of the *Farmer*. He recommends sowing as early as possible. I have invariably found the crop better when sown between the first and fifteenth of May, than when sown before that time. When sown in April, the early rains promote too great growth of tops, and during the latter part of summer seed stalks are thrown out, which prevent the roots from attaining any size.

In sowing, I use a seed drill of my own invention, which sows and covers two rows at once. I can sow two acres per day. I put my rows sixteen inches apart, and thin to about four inches in the row.

I have found it a good plan to mix radish seed with the carrot seed (the Yellow Summer turnip is a good variety); about one ounce of radish to one lb. of carrot seed is sufficient. The radishes come up in a few day, and enable me to trace the rows distinctly during the first hoeing. As fast as they are large enough, they are pulled up for market or home use, and therefore do not interfere at all with the growth of the carrots.

After seeing and trying different implements for the cultivation of carrots and other root crops, and being satisfied with none, I got up a *hand cultivator*, which works admirably. It cuts close to the row, and is adapted to any depth not exceeding two inches, and any width not exceeding two feet; leaving the ground level, with the weeds on the surface. One man can tend from one to two acres per day with it.

The crop should be hoed as soon as the rows can be distinguished; and as soon as the weeds show themselves in the rows, set the boys at work. It is good policy not to wait for the weeds to show, but to run a cultivator through the rows every two weeks, until the tops shade the ground, after which they will need but litti more care before har vesting.

Dig the crop while the ground is dry, and store in a dry, cool cellar, but where they will not freeze.

It seems to be a very prevalent idea that carrots should be planted with the rows wide apart, and thinned out to eight or ten inches in the row. It is a mistaken one. Just as large carrots can be raised with the rows sixteen inches apart, and thinned out to four or five inches, as by the former method, and I think that if "P. Q.," in the April number of the *Farmer*, will try my plan, he too will become an "eager advocate," and not pronounce 1200 bushels of carrots per acre a "humbug."

A. M. H

Rye, N. Y., April 1, 1862.

Sowing Carrots.—Carrots should be sown as early as you plant corn, and before, if the season is warm and forward. From 15 to 18 inches apart the drills should be, and seed of last season's growth used, as carrot seed that is old will not vegetate. Do not let the weeds at the first hoeing get so large as to cover the carrots; if they do you will have a hard job on your hands to cultivate them properly.—T. B. M.

CULTIVATION OF POTATOES IN IRELAND.

At a meeting of the Westmeath Farmers' Club, a series of questions were submitted to the Club in regard to the culture of potatoes. One of the members, C. Levinge, had succeeded in producing seventeen tons of potatoes to the Irish acre (1¼ acres) last year. The following is a condensed report of the replies to the questions:

Q. 1.—"Autumn culture and the time for plowing." R.—A good deep furrow should be given to the land early in the autumn, say in November at latest.

Q. 2.—"Whether drills or ridges are preferable." R.—In dry seasons drills answer well, and probably in such seasons produce most, but on an average of seasons ridges preferred. This latter point affirmed, on a vote, by a large majority, and that the ridge potatoes are far best for eating.

Q. 3.—"Proper width for ridges." R.—From 2 feet 6 inches to 3 feet, with 18 inch furrows. [Mr. C. Levinge recommends the narrower width.]

Q. 4.—"Degree of fineness of soil." R.—The better the land is tilled and prepared, the better for the crop.

Q. 5.—"Quality and quantity of manure." R.—There should be a *liberal* dressing of barn-yard manure, through which a mixture of bog mould is desirable, where practicable. Ashes alone cause the crop to yield well; also pure bog mould alone on stubble, where the soil under is good, and on a limestone substratum. Mr. C. Levinge had used guano, but the potatoes were large and hollow. On high red bog, however, guano had been used with success for this crop.

Q. 6.—"Mode of applying manure." R.—Plant on the manure. [It was agreed to try a piece of ground with the manure laid on *over* the sets, and another with the potatoes stuck, and the manure put on before the potatoes appear over ground, as in Connaught.]

Q. 7.—"Kind of seed." R.—Choose a *large, hardy* variety.

Q. 8.—"Preparation of seed." R.—Should be cut *clean*, and not broken. Mr. Richard Cody recommends cutting with a thin sharp knife, and says the effects of a nick of the spade in digging shows the necessity for this, as where the spade cuts, the tuber rots around. The seed should be allowed to skin over, after being cut, before being planted. Mr. C. Levinge says there will be more marketable potatoes from large potatoes with single eyes, and one cut in each potato, than any other way.

Q. 9.—"Period for planting." R.—As soon as the bud begins to show on the potatoes, probably end of February or beginning of March, for the general crop; but each variety should be planted without delay as the bud appears. Nature points this out.

Q. 10.—"Second moulding or earthing up." R.—*Before* the plant comes over the ground; if done after, the growth is checked, and the progress of the plant retarded, to the great disadvantage of their after-growth. If they should be up before second culture, it is better to earth them up merely, as in the case of drills, not to cover them.

Q. 11.—"Time for raising the crop." R.—Before the bottom of the stalks is quite dry and powdery; that is, while there is yet some green in the lowermost parts of the stalk.

Q. 12.—"Best mode of storing." R.—In pits, made on a level with or over the surface of the ground, and then clamped up and kept dry overhead with straw or other material.

CULTIVATION OF THE SWEET POTATO.

Eds. Genesee Farmer:—In your March number, "Young Farmer," of Kittaning, Pa., makes an inquiry about sweet potatoes. Perhaps I can help him with my experience, as I have been quite successful in that line. And, as there is a probability of there being a scarce supply this season, these remarks may be of use to others also.

The Seed.—In the culture of ordinary potatoes, the tuber is planted; with sweet potatoes, the *sprouts* are planted or set out. I prefer to raise my own sprouts, as I am then certain of the variety. I procure medium size, smooth potatoes, well filled with eyes, allowing at the rate of four bushels per acre. These will probably cost $2.50 to $3 per bushel. Be sure the potatoes have no black or soft spots, and above all do not let them get bruised, for if you do, they will rot instead of sprouting.

Seed Bed.—Between the 1st and 15th of April, take a hot-bed frame and put in it stable manure to the depth of a foot, tramping it down hard. Cover this about one inch deep with sand, level it and lay the potatoes on it about two inches apart. Cover them with sand one and a half to two inches deep, water moderately and put on the glass. Do not water again until the sprouts show themselves, and then very moderately, unless the bed become very dry and parched. The moisture from the heating manure is usually enough to sprout them. Allow just air enough to carry off the surplus moisture.

[As this communication will appear too late for the seed-bed to be available, I will state that sprots can be obtained from reliable growers at 25 to 50 cents per 100. Allow at the rate of 6,000 sprouts per acre.]

Planting and Culture.—The sweet potato requires a warm, sandy soil. With me they have succeeded best on a soil rather gravelly. About the middle of May or the first of June, manure your plot moderately, and plow or spade it in about six or eight inches deep. Then plow furrows about three and a half to four feet apart, and the same depth as previously worked. It is better to run these furrows north and south, for then both sides of the ridges get the benefit of the sun. Fill this furrow about one-half full of well-rotted horse manure. Then turn the furrow back from each side, covering the manure, and making the ridge about six inches high and from fifteen to eighteen inches broad on top. On this ridge, set out the sprouts about eighteen inches apart. If the ground is very dry, and there is no prospect of rain, give them a little water at the time of setting out, which should be just at evening.

It is not necessary to take up the potatoes to obtain the sprouts, but merely rub them off with the finger as soon as large enough to set out; leaving the tuber to throw out a second crop.

Culivate them the same as ordinary potatoes in drills; being particular to lift up the vines and lay them along the sides of the ridge every other week. If this is neglected, the vines will take root from the joints and draw off the sustenance from the tubers.

During the latter part of August, the hills may be opened carefully and the largest taken out for use. Fill the hole up and the smaller ones will soon be ready for the same operation.

For winter keeping, they should be dug on a warm, dry day in the first of October. Dry them two or three hours in the sun, and pack them in barrels or boxes in dry sand, chopped straw, or, what is still better, oat chaff. Store them in a warm, dry place. A. M. H.

Rye, N. Y., April 2, 1862.

HIRED HELP ON A FARM.

In these times, when the farmer has to pay a good share of his profits to the Government in the shape of taxes, it will not do to be over easy with our hired help. When I hear it said of a farmer, "he is a nice man to work for," I conclude that he is rather too easy with his men in some respects. For instance, hands who have no interest in the result of their labors, beyond receiving their wages, can and often do fritter away a great deal of valuable time in useless conversation. One begins a "yarn," and the rest have to stop and listen, then work a little and stop to get the "hang" of the story; and the day passes, and about three-quarters of a fair day's work is done by each man.

Now, if the farmer who employs these men allows such a waste of time, he is called "a nice man to work for," but he pays very dear for the empty honor of such a name. A little sternness and determination on the part of the employer is not amiss. When you hire a man, let him understand at first that his labor and time belong to you. You can tell him very properly, in plain English, that if he is accustomed to keeping his tongue on the wag when at work, you don't want him; that if he works for you, in a gang of men, he has got to keep a close mouth, or his name is "*walker*."

Nor should a farmer be absent from his hired hands a minute more than is absolutely necessary. Some farmer has observed that "his old hat stuck up in the field was worth a dollar a day to him, in causing his hands to keep steadily at work."

"Gentlemen farmers," who have retired from cities to the country, are subject to a severe tax in not being present with their hired men, and they often sigh over the results, "All I have grown cost me fifty per cent more than to buy my provisions in the market." T. B. MINER.

Clinton, N. Y.

How to Grow Melons, Cucumbers, Squashes, etc.—As soon as the seeds begin to crack the ground in upward vegetation, lay over each hill a half a newspaper or other sheet, a little raised in the centre, and place a hoeful of dust at each corner, so that the winds can not blow the papers away. Keep them on till the third leaf grows, and no bugs will trouble the vines, and they will grow as fast as in a hot-bed.—T. B. M.

AN INQUIRY—SAWDUST AS MANURE.

Eds. Genesee Farmer:—I have often seen sawdust recommended in agricultural papers and books, but have never seen any article in which there was any distinction made between the dust from different kinds of wood. Now, I am well convinced that decayed wood is a very valuable manure, but I can easily perceive that the soil around a decayed oak stump is at first more fertile than that around a pine stump. Is it on account of the difference in timber, or because one decays faster than the other?

We have here a very large tract of sandy plains, with a rich, deep soil for the kind, originally covered with oak and pine, with a large predominance of the latter, but now covered with logs and stumps, the debris of lumbering establishments, and oak grubs. Our soil lacks in organic matter, on account of the fires that have run over it, and consequently it lacks in the capability of retaining moisture. We have around our lake (Muskegon, six miles long and two broad), fifteen steam sawmills, cutting in the aggregate some 50,000,000 feet of pine lumber per annum. The sawdust (except the small quantity used to support the steam) is carried off in carts, and either burned or used in filling up docks, wharves, gullies and sloughs, or in paving the roads; but at the rate it accumulates, these places will all soon be filled up, and it is a question of real importance whether this article can be used to any benefit on our land.

Pine is a good timber to last where it is kept from the ground, but when used for stakes or posts it rots off at the surface of the ground very quick, especially in a sandy soil. The power of the dust to retain moisture seems very great, for where it lies in any depth it is always moist an inch or two below the surface, and where it is kept constantly moist it does not seem to decay. The inference that I draw from these facts is, that if spread upon our soil to the depth of one or two inches, and worked into the surface soil, it will assist in retaining moisture even when green, and that it will there decay very fast, and that when so decayed it will enrich the soil. Am I correct? I ask you, Messrs. Editors, or any of your readers or correspondents who have had any knowledge of the matter, either by theory or experience.

Of one thing I am sure, from my own observation—that in the absence of straw, as with us, it makes a good litter for horses and cattle, and that when mixed with the droppings of horses, it prevents entirely that rapid fermentation so destructive to this kind of manure. Does it not also fix and retain the ammonia from their liquid evacuations? S. B. P.

Muskegon, Mich.

Berkshire Hogs.—The pure Berkshire hog is black, with streaks of white on the face and sometimes white spots on the legs. They grow to about the same size and weight as the Suffolks—usually dress about 200 lbs. at eight months old, and at one year reach from 300 to 350 lbs. It is almost impossible to get this breed in a lean condition. I sold a pair last season to a neighbor, who tried to reduce the sow in flesh, for breeding, and almost starved her, and yet she remained as fat and plump as ever. I have none for sale, so don't consider this a "puff."—T. B. M.

WALKS AND TALKS IN THE GARDEN.—No. I.

"What splendid weather we are having! A week ago the snow was still on the ground in some places, and now the soil is in first rate condition to work."

"True. There is some danger of cold weather yet. It seems scarcely possible that we are to have summer all at once. A warm April, like this, is often succeeded by a cold May. In such a climate, it is hardly worth while trying to have much of a garden without the aid of hand-glasses, or boxes with a pane of glass 8 by 10 on the top, fitting in a groove, so that the pane can be moved up and down for ventilation. The cost is but little, and the advantages very large. For melons, cucumbers, and Lima beans, they are indispensable."

"Even a box without glass is useful. An old cheese box is just the thing. A piece of paper, or anything that will break the wind, is advantageous."

"The prospects for fruit were never finer. These peach trees are full of fruit buds, and if nothing happens, we shall have a grand crop."

"Confound the borers! Got a knife? No gardener should ever be without one. Scrape away that soft mass. You'll find him. Up his hole, is he? Well, here is a piece of wire. Poke him up. Squelch! There is one rascal less."

"Lime and ashes are said to be good to destroy borers, scattered around the base of the trees. But I have not tried them. A writer in the last number of the *Monthly* says burning fluid, applied with a sponge around the roots of the trees, will destroy them. Or, if they are in holes, send it after them with a small syringe. Possibly good; but 'cold steel' certainly is."

"Too bad! isn't it? Nicer pear trees never were seen. Over thirty blighted. Well, plant again. There is nothing else to be done. Choice pears are a great luxury, and, like everything else, can not be enjoyed without labor. There is no certain cure for the blight, any more than there is for the cholera. People in good health suffer the least. So healthy pear trees are less liable to the blight. The great point is to have the wood thoroughly matured. It is possible that we manure too highly—especially with organic matter. Lime, ashes, superphosphate and other mineral manures, will probably be found favorable to the early maturity of the wood. Thorough summer pinching is also worth trying. Mulching during the early part of the season is undoubtedly good. But toward the end of summer, it strikes me it would be useful to sow some crop among the trees that would carry off any excess of moisture in the ground, and thus check the succulent growth of the trees."

"Spurry is perhaps the best crop for this purpose. It can be sown the latter part of July. It is one of the best renovating crops known, and will grow late in the fall. It might lie on the ground all winter, and be turned under next spring. It is just the crop for peach orchards—far better than clover, as that robs the soil of moisture during the early part of summer, when the trees need all they can get. When plowed under, it would furnish a large amount of organic matter, and this on our light, sandy-soil peach orchards, is very desirable."

"It is not a hot-bed. Merely a cold-frame for sowing cauliflower and cabbage seeds in, and pricking out celery and tomato plants from the hot-bed. It is a great thing. Quite as important as a hot-bed, and less expensive. Plants raised in a hot-bed need hardening off before setting out in the open ground. And if you have not a hot-bed, a great many plants can be started in a cold-frame, such as cauliflowers, cabbages, tomatoes, celery, annual flowers, etc."

"No. Melons do not transplant easily. Sow them where you intend them to remain. Make the ground rich and let the soil be thoroughly pulverized. Sow six or eight seeds in a hill, and cover with a box. Attend to the ventilation. Pull out the weaker plants, and let three or four good, strong plants remain in each hill."

"Let the *whole ground* be dug, and manured if needed. The roots spread to a considerable distance. It is a great mistake to dig a small hole and put a little manure in it, and leave the rest of the ground so hard that the roots can not penetrate it, and so poor that if they could they would find little plant-food in it."

"Four feet is far enough apart for the hills. Pinch in the runners thoroughly. It is nice work for a lady who has any taste for gardening. You will get as many melons as if they occupied twice the ground, and they will be far better."

"Treat cucumbers in the same way."

"Rather risky to plant Lima beans yet. But I mean to try a few, and cover them with boxes. If they fail, it is only replanting."

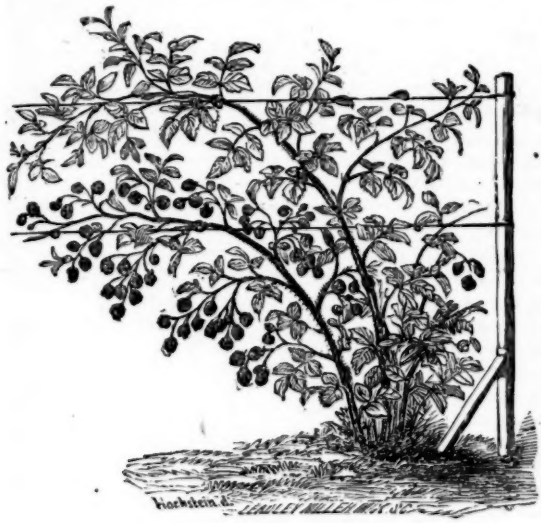
"The mice have played the mischief with these grape vines. They have eaten off many of the buds and in some instances whole canes. They were laid down and covered with earth, but I guess it was not altogether free from rubbish, which afforded a harbor for the mice. Out on the trellises in the open ground, though covered in the same way, they have done no damage. These, trained to the fence, alone suffered. The fence drifted the snow and thus gave the mice a better opportunity to work. If they had been Isabellas I should not have cared so much, but who likes to have the Delaware, Diana and Rebecca used up in this way?"

"Those are some Oportos I got from Dr. SYLVESTER yesterday. If these are a sample, the Doctor sends out good vines. Canes as thick as your big finger, two feet long, with plenty of roots. I can not but think these more likely to succeed than the small plants, no thicker than a lead pencil, generally sent out by nurserymen. With proper care, however, even these do very well.

"They were taken out of their winter quarters yesterday. The canes are strong, and the buds large and healthy. Bending them down in this way, and putting a little soil on them, is the only way to *make sure* of a good crop of raspberries. The winter has been so mild that it was unnecessary this year, but this could not be known beforehand."

"The blackberries were left uncovered. They were trained to straight sticks last year, but this year, as you see, we are arching them over—tying two hills together across the rows, and leaving the stakes to train the young shoots to, so that they will be out of the way."

"Yes. The plan first recommended was to train them



LAWTON BLACKBERRIES TRAINED ON WIRES.

to a couple of wires stretched along the rows and fastened to posts at each end."

"As you say, it is perhaps true that most gardeners sow peas too thick, yet for an *early* crop I like thick seeding. It seems to be a well established fact that *thick seeding* is favorable to early maturity. The plants being thick on the ground are checked somewhat in their growth, and thrown into premature fruitfulness, just as dwarfing a pear or apple will make it bear earlier. I have just sown a quart of Daniel O'Rourke in a row seventy feet long. The usual allowance is one quart for a row one hundred feet long. The English rule, I believe, is thirty peas for each lineal foot, for the early dwarf kinds; and for the late marrowfats, only twelve peas to the foot."

"I have heard of planting peas in hills three to five feet apart, and poling them like beans, and the plan strikes me favorably. They would get plenty of light and air. Five or six peas in each hill is enough."

"I believe in plenty of seed for all crops. You may calculate that 25 per cent. will not germinate, and 25 per cent. be killed after it has germinated, and another 25 per cent. of the plants be killed after they are up, by cold rains, winds, etc.! Sow enough to insure a crop and then thin out. Onions and carrots, especially the Early Shorthorn, can be thinned out after they are large enough to eat. In fact, these young carrots are more delicate than when older and larger."

"Oh, of course, always sow in drills. Who that has once had to weed onion beds would sow broadcast? It is less labor, and the hoeing benefits the crop. Nothing like the hoe. It weeds and waters and manures all at the same operation."

"The potato was by no means popular when first introduced, and its botanical brother, the tomato, as Buist says, was 'almost detested' in this country thirty-five years ago. Ten years later, it was the great panacea for all the ills that flesh is heir to, and the patent medicine men advertised all sorts of 'extracts of Tomato.' Now it occupies as much ground as the cabbage, and is found in every garden throughout the United States. Everybody likes it. It is good in all forms, in all seasons, raw or roasted, stuffed or stewed, canned or pickled, in summer or winter. It can be raised so easily and produces so abundantly that its culture has been recommended to farmers as a crop for their milch cows."

"Start them in a hot-bed and prick them out into a cold frame, when an inch or two high. This will give you early and *stocky* plants."

"One of the most successful tomato growers in this city tells me that he finds the plants which spring up from self-sown seed produce almost as early a crop as those raised in a hot-bed. He prefers a warm, light, sandy soil, not too rich. If too rich, they are apt to run all to vines, but this may be prevented by pinching them in thoroughly."

"Salsify, or vegetable oyster, is getting to be quite popular—as it deserves to be. At this season of the year nothing is nicer, when properly cooked. Like the parsnep, it can remain in the ground all winter. Cultivate as you do carrots."

"This ground where the celery was last year, is just the ground for beets—rich and deep. Sow a few radish seeds along the rows. They will mark the rows and enable you to hoe before the weeds get the upper hand. The radishes will be ready to pull before the beets need thinning."

"For a winter crop, sow the blood beet about the last of May."

"Buist says, 'those who can plant corn can plant Lima beans.' True enough; but it is one thing to plant and another to reap the fruit. Lima beans are planted in hills like corn, and some seasons require no more care. But often the first sowing perishes, and you must replant, and then the crop is apt to be late and poor. Make a good hill of warm, rich earth; work it over till it is as fine as an ash heap. Plant eight or ten seeds in each hill. If three grow, it is enough. If more, thin out. The poles should be twelve feet high, and it is better to stick

them in the ground at the time of sowing, and thus avoid the risk of disturbing the plants after they are up."

"A fork with five flat tines is better than a spade for most garden purposes. It breaks up the soil equally well and with less labor. Among trees, it is greatly to be preferred to the spade, as it does not cut off the roots. Grapes especially are often injured by spading the ground, even at a considerable distance from the vines. Few people have any idea how far the roots of the vines extend—or, for matter of that, of any other plant or tree. If cut off at this season, the roots of the grape will bleed as profusely as the canes. The Dutch hoe or scuffle and the digging fork should be more generally introduced into American gardens."

"But, excuse me, the sun is coming out, and I must go and cover over the glass of the hot-bed, and give a little more air."

FLOWERING OF THE COCO-NUT PALM.

A very great and wholly unexpected event, says the *Gardeners' Chronicle*, has occurred in English horticulture. The Coco-nut Palm has flowered. At Syon, where so many fine things have been produced which no other garden has seen, where the almost uncultivatable Mangosteen has ripened its fruit in perfection, this the most valuable of all the products of the vegetable world provided by an all bountiful Providence for the support of man, has expanded its flowers. Not however on that lofty Palm tree which Rumphius called the Arbor Calappus sive Cocbifera altissima, but on a specimen of the pigmy breed from the neighborhood of Galle, in Ceylon. The trunk of the Palm at Syon is not, we should say above two feet high, and it is from among the magnificent leaves that form a bright green plume of unrivalled stateliness that the yellow blossoms have sprouted out. It must be highly gratifying to the noble Duke in whose celebrated garden this success has been achieved, to find that he alone in Europe is the possessor of so rare a specimen.

AMERICAN APPLES FOR ENGLAND.

Walter Elder, who visited Great Britain last year, furnishes the *Farmer and Gardener* some interesting observations on the agriculture of that country. We copy what he says about raising apples for the English market.

Apples all over Great Britain are far inferior to ours. If numbers of farmers near to railway stations or steamboat landing were to plant ten or twenty acres each with apple trees, and give them good culture, for the sole purpose of exporting them to Great Britain, it would be the most lucrative speculation they could enter into. They could be landed in Liverpool in a fortnight after they were picked from the trees, and in twenty-four hours more they would be transported to any part of the United Kingdom. Agencies could be made in our principal cities and in Liverpool, so that farmers would get ready cash for them as easily as they now get it for their grain. Indeed, if the thing were fairly begun, merchants would go and buy them upon the trees and take them away.

Hedges.—A correspondent of the London *Farmer's Magazine* says one of the great errors in planting hedges is the neglect of the subsoil. No matter how well the surface is prepared and the weeds kept out, if the subsoil is not right, the hedge can not be durable.

A POMOLOGICAL MAP.

Mr. William Ingram, a correspondent of the London *Florist*, in a short article on the influence of soil and climate on pears, which he says are more susceptible to these influences than any other fruit, suggests that a Pomological Map of Great Britain should be formed, so that persons desiring to plant fruit trees may readily obtain information to guide them in the selection of varieties suitable for the section of country in which they reside. This would be fully as useful with us as in England. Indeed, even more so; for our country is still more variable as to soil and climate.

The complaint is often made that it is impossible to succeed in pear-culture, and undoubtedly one reason is that in purchasing trees no allowance is made for the peculiarities of the locality, where they are recommended, in transplanting them to other places. Mr. Ingram mentions two places, only twenty-five miles distant, where the pears which in one are excellent, in the other are utterly worthless—scarcely one variety being equally good in both. Most fruit-growers know that they have often, in reading a list of fruits recommended by some local society, been astonished to find the names of pears which they had tried and knew to be tasteless and in every way poor, connected with such adjectives as "sweet, juicy, melting, aromatic, delicious;" and among the condemned list to find their favorites.

For nurserymen more accurate information on this subject would be invaluable, and would relieve them from much of the opprobrium which is now cast upon them by those whose trees prove a failure. There is so much interest now in pomology that it would not be difficult for the American Pomological Society to gather the necessary information for such a map as Mr. Ingram suggests, if all the local societies would do their part in collecting and arranging the observations of experienced fruit-growers in their neighborhoods. Horticulturists are proverbially liberal in imparting information, and no one at all interested in the subject would hesitate to take the trouble to make the necessary record to promote this object.

Duchesse d'hiver, or Tardive de Toulouse Pear.—This new pear, an article on which, from the *Revue Horticole*, we gave in the July number of the *Genesee Farmer* last year, has borne the test of another season with great success, and appears destined to become a popular and useful fruit. A late number of the journal above mentioned publishes a colored plate of it. The specimen which is there represented is about four and a half inches in diameter, both transversely and longitudinally, being nearly spherical. "The grained skin of a clear green, sprinkled with fawn colored dots, is orange-red in the sun, and at maturity takes a general color of pale yellow." A winter pear having the qualities ascribed to this one, must be of great value, and we hope that next year it will be introduced into this country.

Low-Headed Trees.—The *Illinois Farmer* says: "The system of low heads is bound to win, as one after another gives in his adhesion to it. It is certain that with high heads, the fruit crop is not only tardy, but uncertain; with low heads, we can not be any worse off, and may be much better. Let us give it a thorough trial."

"WHAT KINDS OF GRAPES SHALL I PLANT?"

At a recent meeting of the American Institute Farmers' Club, Solon Robinson said he had been induced to undertake to answer this question in consequence of receiving the following letter from a German friend:

I have two sons to whom I wish to leave each a vineyard. I came from Steinberg, and my sons inherit a love for the vine; but your favorite American kinds are not good to our palates. Now, will not the American taste soon so far improve as to reject such poor flavored kinds as the Isabella and Concord, and just as the vineyards come into bearing, will they not be found worthless, and the taste all gone to Delaware and Diana, which remind me of our own Traminer and Rissling, which refresh like wine? Please tell us, and by so doing, tell many in Monmouth county who, like us, desire to know. Have you had the long and extensive observation that is necessary to form an opinion, or can you tell me who has?

Your friend, GOTLIEB BURZEL.

Mr. Robinson remarked that this is the most important agricultural question of the present day. It is important because it has now become as certain as anything of the future, that America will surely become a great vine-growing and wine-producing country. That this event will certainly happen we are just as sure as we are that France is already a great producer of grapes. The extent of vineyards already planted is greater than the mass of people have any conception of; and of the extent of preparation for planting no one has an idea, except the very few whose interest or taste has led them to inquire. We are assured by the best authority in this country that there are now planted, and in preparation for planting, at least a thousand acres of land in the small State of New Jersey, and that in only a few counties, and yet grape growing in that State has been as yet hardly thought of, and so little talked about that its own citizens are not generally aware of the progress of this new and great industrial pursuit of a few of the people. Yet in a few years the grape crop of New Jersey will become one of the most important of that State, and the product of its vineyards will not only furnish New York with an abundance of fresh fruit, but will put a strong check on the importation of wines.

There has been within a year past one tract of twenty thousand acres of forest land, in Cumberland county, opened to settlement, and a town laid out in its centre called "Vineland," because the proprietor believes the soil well adapted to the growth of grapes, and intends to encourage all the settlers to devote their attention to their cultivation. We should not be surprised to see five thousand acres of this tract planted or prepared for planting with vines within five years.

Monmouth county, too, will soon become as famous for its great crops of grapes, as it has been in past years for its peaches.

Pennsylvania is also moving, in all its breadth, from the Delaware to the Ohio, in its preparation to become a wine making State.

New York has already several vineyards of considerable importance, which furnish its cities with some hundreds of tons of fresh grapes, and some of them have made wine to a limited extent, which we hope never will be any greater until their proprietors learn to make something more worthy of the name of wine than the sweetened alcoholic beverages which they have produced, and which some of them have the effrontery to advertise as "pure juice of the grape for sacramental purposes."

In Connecticut, there is at this time a very decided "awakening" upon the subject of grape growing, and large quantities are already produced, and the intention of making it eventually a wine-producing State is very evident.

Mr. Robinson mentions several facts, all tending to prove the Delaware the best of all the hardy American grapes. It was thought that it would not prove a popular market grape on account of its comparatively small size, but a gentleman who had sent them to the New York market found that those who once purchased them returned for more, and they had been sold at fifty cents per lb.

ORCHARD CULTURE AND ITS RESULTS.

Immediately after the orchard is set, coarse manure or spent tan-bark should cover the ground from four to six inches deep over a diameter of six feet, with the tree standing in the center, and remain there during the first season, while the rest of the ground is being tilled with a hoed crop. Corn is preferable.

The plow should never come within three feet of the tree, nor any vegetable allowed to grow. Year by year the plow should recede farther and farther from the tree till it be excluded from the orchard entirely. Yet a surface culture should be continued by means of a cultivator, and the ground sown with buckwheat till the size of the trees exclude all culture except by hand. At this stage of the orchard, a general mulching might take the place of cultivation, or hog-culture when practicable, or any way by which the vegetation might be promoted to growing and the ground receive sufficient nutriment for the benefit of the orchard.

Pruning should begin when the trees have grown two years, and thereafter annually, with a knife, and no limb should remain to grow so large as to require a saw to cut it off that is to be removed at all.

The trees require the entire resources of the soil, in a good state of cultivation, from the time of setting out until it begins to produce crops of fruit, when manuring is necessary in proportion to the quantity of fruit produced. The supply to the soil must necessarily be in proportion to the crop of fruit produced in order to secure annual productiveness. Without it, the fruit will degenerate in quality, size and quantity, the trees become unthrifty and the orchard a failure, as is generally the case.

With good trees, set in a good soil, and well cared-for as above, small crops will usually be produced the fourth or fifth year, and an increase each succeeding year—often the eighth year the orchard averaging from one to two barrels of fruit per tree.

Annual productiveness from annual manuring is a settled fact, and the few (very few) who follow the rule reap a rich reward. I could adduce many instances in demonstration, but will mention two: In the first case the orchard was planted of one hundred and fifty trees, by Benj. Hoyt, of New Canaan, Conn., in 1853, on an old piece of land which had been under cultivation since long before the Revolutionary war. The trees were set eighteen feet apart each way, and treated after the above re-

commendation. His orchard began to bear the fourth year, and a regular increase of quantity continued till last fall (1861), when many of his trees averaged two barrels of apples each, and others nearly two barrels. He sold more than five hundred dollars worth from this single crop. The entire orchard of MOSES JONES, of Brookline, Mass., averaged over two barrels per tree the eighth year from planting.

Apple trees produce just as much fruit as there is material in the soil to sustain. A bushel of apples exhausts the soil as much as a bushel of potatoes, and nearly as much as a bushel of onions, and every farmer and onion raiser knows that he could not raise successive crops of these for a long time without great deterioration of the soil and crop, without annual manuring.

Deep plowing or seeding with grass or the small grains would soon destroy the value of an orchard. The feeding roots of the apple tree mostly run near the surface, and the plow would cut them off, and then the food necessary could not reach the tree to benefit the fruit. The orchard generally blossoms, and the principal assignable reason for the blasting and failures of a crop of apples, is want of food, D. C. SCOFIELD.

Elgin, Ill., April, 1862.

DWARF DAHLIAS.

WE have never admired the dahlia, either in the garden or on the exhibition table, as most persons think all lovers of flowers should. It has, without doubt, great beauty of color, and there is a certain charm in its regularly formed, wax-like petals; but it is too stiff for in-door decorative use, and is never fitted for boquets. It seems to be totally destitute of the power of assimilating with other flowers—it can never be arranged except with the different varieties of its own species.

In the garden, it produces a fine effect; but to rank it, as florists do, with roses, camelias, china asters, and carnations, is, we must think, in exceedingly bad taste.

After these objections to these "grand autumnal flowers," we have pleasure in announcing that a new race of them has been introduced by leading European florists,—the Pompon or miniature-flowered varieties—to which some at least of the foregoing objections do not apply. They are a new race of the well known florists' dahlia. At the present, the principal difference consists in the somewhat more slender character of the plants, and the smaller size of the "flowers" or flower-heads, which latter may be taken as about half that of the varieties usually grown for show purposes. The average diameter of the flower-heads being a couple of inches, very few reaching 2½ inches. Many of the free flowering plants have branches bearing three or four flowers, which are suitable for table boquets. Their odor rather than their size exclude them from hand boquets. Some of the varieties grow to a height of four feet, and some even five or six feet. Some form a fine, spreading head of long-stalked blooms, while others are stiffer habited, with the blooms closer to the foliage and altogether less graceful. Some have the regularly cupped and shell-like florets of the best show flowers.

When these Pompon dahlias shall have been thoroughly dwarfed (as who can doubt they will be?) and we have plants two or three feet high only, with the little balls of florets thrown out well above the foliage in gracefully spreading heads, we shall have one of the prettiest plants that can be desired for the garden in the late summer and autumnal months. At the present time, four feet plants are, as a rule, the dwarfest of these Pompons which are available for the parterre, but these will be found to be very pretty objects in situations to which this stature is not inappropriate.

Some of the most desirable of the dwarfer varieties are:

Annie—blush tipped; flower heads two inches in diameter.

Little Darling—bright rose crimson.

Canary Bird, sulphur; Child of Faith—white.

Fairy Nymph—rosy lilac.

Crimson Beauty—rich maroon crimson.

Star and Goldfinch—yellow tipped.

These grow three or four feet high.

MULCHING YOUNG FRUIT TREES ON THE PRAIRIES.

A CORRESPONDENT of the Wisconsin *Farmer*, residing at La Prairie, says that when he set out his first orchard he mulched his trees with manure, and let it remain through the summer. The consequence was, that as the manure became rotten, the white grub became so numerous that they ate the bark off around the roots and killed many of the trees. His neighbors suffered in the same way from the same cause, and he has come to the conclusion that if trees are mulched, it should be with dry straw, and when it begins to rot it should be removed. He adds:

I keep my orchard tilled and well manured, and do my pruning in the summer. I take pains to keep my trees free from worms, and have the most thrifty and best bearing trees, according to age, of any in the neighborhood. I have a poplar and locust wind-breaker on the west and south, which I think is indispensable on the prairie. I am satisfied that if we observe this rule—that is, make a good wind breaker on the east, west and south—get the hardy kinds of fruit, and when one tree is lost, replace it with another, and take good care to keep the trees clean from their enemies—every farmer can have plenty of good fruit, even on the prairies.

GRAPE CULTURE IN CALIFORNIA.

THE Legislature of California last year authorized the Governor of that State to send a commissioner to Europe for the purpose of collecting information in regard to the culture of the grape, manufacture of wines, etc. The Governor appointed Col. HARASZTHY, and he at once proceeded to Europe on his mission. He has just returned and made his report, from which it appears that he has made large purchases of the cuttings of the best varieties of grapes cultivated in the different countries of Europe. They have been planted out, and it is thought over 300,000 rooted vines will be ready for distribution this fall.

Col. HARASZTHY thinks the soil and climate of California the best in the world for the culture of the grape. He also thinks "no country can surpass this (California) in raising the sugar beet, sorgho and imphee. There is no part of the world, except, perhaps, Africa, which can produce the same quantity of these commodities to the acre."

THE IMPORTANCE OF FRUIT CULTURE.

The New York *World* calls attention to the sanitary effect of a plentiful supply of fruit in large cities, and adds: "To such an extent is the apple now made merchantable for foreign exportation as well as for consumption on our eastern sea-board; that four or five agencies for Boston and New York merchants bought about half a million of dollars worth of the last crop, in three of the best apple-growing counties of this State—Monroe, Wayne and Orleans.

This, to be sure, is far beyond the usual extent of this trade within such brief limits; but there are several other counties scarcely inferior to those above named, in which the traffic is large and growing—though it would be difficult to find any superior locality for this kind of product, or, we might add, for fruit culture generally—the soil and temperature being suitable, and the farmers and dealers finding reciprocal interest in promoting the increase and distribution of the crops.

Here is example and stimulant for persons who desire rural pursuits—as fruit culture is freed from sundry difficulties (real or supposed) which prevent many from embarking in ordinary farming.

The peach, the pear, and other fruits, find ready sale now within reasonable railroad distance of our eastern cities. Western New York is becoming, if it is not already, one of the greatest localities in the world for fruit of all kinds consistent with the temperature. The facilities of railroad transit to the seaboard enable that region to supply readily all the cities between Washington and Quebec. Boston and New York, however, are the chief points of the trade. The prices realized for some of the fine fruits, such as the choice pears, are almost fabulous."

There are many other sections, both in the United States and Canada West, where apples can be raised with equal if not greater profit, than in Western New York—highly favored by soil and situation though it be. Every section should raise at least enough for its own consumption.

CULTIVATION OF THE STRAWBERRY.

Eds. Genesee Farmer:—I now send you a few remarks taken from "Saxton's Rural Hand-Book," page 106:

Culture of the Wood Strawberry.—This variety is far before any other in point of flavor, and if transplanted into gardens, may for two or three years answer very well, and if not too highly manured, preserve their flavor and increase their size. But new plants must be obtained every two or three years, from the woods, to make new plantations, or they will degenerate.

Soil and Manure.—The soil proper for this variety, as well as all others, is light, warm and gravelly, and the manure to be applied should be exclusively vegetable, and not animal manure. The usual practice is to manure the ground with rotten dung, with a view to increase the size and quality of fruit; but, in doing this, the flavor is destroyed in proportion to the richness of the soil. Besides, high manuring produces strong vines, and no fruit. Rotten leaves, decayed wood ashes, in small quantity, mixed with other vegetable substances in a compact heap, will make better manure for strawberries than any animal substance whatever. As the vines which bear this fruit require great moisture to bring the fruit to its proper size, the soil and solution in which they are placed must not be too dry.

Propagation.—The usual time for transplanting strawberry plants is August. That time is chosen because they have done bearing, and have made offsets, if the season has been favorable, of strong plants, set from their runners. Plantations made at this season will bear some fruit the next summer. But if you can get good, vigorous plants in May of the preceding season, I prefer to plant them, as it saves a year nearly, the plants being ready to bear abundantly the next year.

Why could not wild flowers be transplanted in the same way?

C. S. R.

A FRUIT GARDEN FOR THE FAMILY.

Every family should have a fruit garden. Fruit is not only a great luxury—it is essential to health. A few dollars expended in setting out plants and trees will save many a dollar from being paid to the family physician.

First—You should have a small piece of ground, say from one-eighth of an acre to an acre for a fruit garden. This should be deeply plowed once or twice and thoroughly harrowed. Or it may be worked with a spade instead of the plow. Now procure from two hundred to five hundred strawberry plants, and set them out in rows three feet apart, and two feet apart in the row. The only culture they need is to keep out the weeds, and work the ground occasionally with the hoe. The following season you may rely upon a crop of berries that it will do your eyes good to behold. More bushels of strawberries can be produced from the same ground than potatoes.

A few dozen plants of gooseberries should be set out in rows five feet apart each way. The Houghton Seedling is the only variety we have found to succeed well in this climate.

Currants must not be forgotten. They are so indispensable to every family. In their green state, what delicious tarts and fine pies they make in early summer time, before we can obtain other fruit. When ripe, and served up with sugar on the tea table, they are liked by nearly every one. And what delicious jelly can be made from them to eat with roast turkey, or wild ducks, or other meats. How can the good wife get along without a few dozen currant bushes? The thing is impossible, and especially to get along well. The Large Red Dutch is the best variety. Plant in rows about five feet apart, and be sure to cover all the ground in which they are planted five or six inches deep with old straw, hay, littery manure, or something of the kind, so as to keep the soil moist and cool. With this treatment, they will make double the growth they otherwise would; their leaves will not drop in August, as they do when not mulched in this climate, and they will yield ten times as much fruit. Bear this in mind if you would have a large crop of currants.

The luscious raspberry must also come in—for it is one of the finest of fruits when in perfection. Put up in cans or bottles, like strawberries and peaches, it far surpasses either. The fruit is not as watery as the strawberry, and is better on this account for canning purposes. We always lay in a good supply, and have never found any one who did not relish them.

The New Rochelle or Lawton blackberry, where land can be had in abundance, and especially where wild blackberries are not abundant, should be planted. It will take two or three years to produce much of a crop; but then it will be found very prolific, and if the fruit is left on until perfectly ripe, it is excellent. All acknowledge that the blackberry is one of our most healthful berries. A hundred plants will be abundant for a family. They should be put in rows about eight feet apart, and six feet apart in the row. It is better to mulch the plants, as is also the case with all the plants we have mentioned. They will grow better and be more productive.—*Valley Farmer*

Ladies' Department.

WORSTED FLOWERS.

GODEY'S *Lady's Book* is publishing patterns and directions for making boquets of worsted flowers, and we have had a few of the prettier ones engraved, thinking that they might interest the lady readers of the *Genesee Farmer*.

CONVOLVULUS.

Cut a circle in pasteboard exactly sixteen inches in diameter. Make with a punch a small hole exactly in the centre. Make twelve marks on the edge of the card, at precisely even distances one from the other, and pass twelve pieces of wire through the hole, over the edge of the card, and through the hole again, at exactly the places marked. You have thus twelve sides of wire, perfectly regular. Fasten these wires firmly together, and cut at the ends.

Take yellow zephyr, attach an end to the wires at the hole in the card, pass this worsted round each wire once, back, and round the nest, till you make the circle. Make eight rows in this way. Fasten on white worsted by slipping it under one of the yellow rounds, and make six circles of white; then fasten on pale pink, make three rows, then three of a deeper pink, three still deeper, two again of the second shade, and then two of the lightest. Fasten off the zephyr, take the wire, and bend it to form a bow or cup-like flower, like the annexed engraving.

Take six light green pistils*, and, passing them through the base of the flower, attach them to a wire nine inches long; then finish by twisting green zephyr round this wire to form the stem.

Blue or violet may be used instead of pink, if preferred, or the boquet can contain one of each color.

ANEMONE.

Procure a mould two inches long and two inches wide at the broadest part; or, if you prefer it, cut one of smooth card. It should be exactly the form of a half circle at the top, but be sloped nearly to a point at the base, to form the shape of the petal of an anemone.

Take two pieces, twelve inches long, of brass wire, extremely slender, and with it encircle the mould.

Take pink zephyr and wind it smoothly around the wire, to form the edge of the petal; then carry the zephyr lengthwise from one side of the wire to the other, winding it over the wire each time it passes backward and forward, until the mould is entirely covered. Then remove the mould and twist the wire ends firmly together at the base. Make four of these petals exactly alike. Fasten to a stem nine inches long, three large green stamens. Put the four petals round these stamens, fastening them lightly together. Twist green worsted around the stem.

RANUNCULUS.

The ranunculus has seven petals of a bright red. The mould for these should be one inch and a half wide, and the petal formed like those of the anemone.

The heart of the flower is of a deep maroon color. Make a circle of wire, and pass the maroon worsted across it until it is entirely and smoothly covered; then on the edges of this make small bunches of loops of green worsted, and between these place small yellow pistils. Fasten, out of sight, a stem, by putting four wires at regular distances on the circle which forms the heart, and twisting them together in the centre. Then sew the petals, as seen in the picture, to the maroon colored circle. Cover the stem with green zephyr.

* Stamens and pistils are usually purchased ready-made, but if you prefer it you can make them quite easily with an exceedingly slender wire, and some colored wax. Separate a piece of zephyr worsted into as many threads as possible, and with these wind the wire, and put the wax on the end, imitating nature as closely as possible.

SUMMER FASHIONS.

THE fashions for this season are but little changed from last year. In bonnets, the same styles prevail—white crape and black lace, with bright colored flowers, and sometimes a band of ribbon, the same color as the flowers, is put across the bonnet and forms the strings. The flowers are not put on the front as before, but just above the cape, near the crown: or if they do commence on the front, they run back to the crown. Children's hats are a little altered. For boys, the crowns are rather high and bell-shaped. A white straw, with rather drooping brim, trimmed with black velvet, and a knot of lilies of the valley, makes an exquisite hat for a young girl.

Black and white checks, with sacques of the same material, are favorite street dresses. Standing linen collars and very narrow cuffs to match are much worn. The fancy neck-ties still continue in favor. Garribaldi shirts, made like those worn with Zouave jackets, are now made of various materials, silk, muslin, maascilles, flannel, etc., and worn with any skirts—scarlet silk or flannel, braided with black, are quite stylish.

Mantillas are made pointed in the back and with long, square tabs, either fitting to the neck or as scarfs, and are trimmed with ruffles. Barege shawls, like the dress, trimmed with ruches or bound with ribbon, will be much worn this summer, and short black silk sacques with but little trimming, made like the cloth ones, will take the place of the long sacques and heavy mantillas that have made a warm day in summer such a terror to all fashionably dressed women for two or three years past.

Miscellaneous.

I idolize the ladies. They are fairies
That spiritualize this world of ours.
From heavenly hot-beds, most delightful flowers,
Or choice cream-cheeses from celestial dairies.
But learning, in its barbarous seminaries,
Gives the dear creatures many wretched hours,
And on their gossamer intellect sternly showers
Science, with all its horrid accessories.
Now, seriously, the only things I think
In which young ladies should instructed be,
Are stocking-mending, love and cookery—
Accomplishments that very soon will sink,
Since Fluxions now and Sanscrit conversation
Always form part of female education.

MONOTONY.—Monotony is pleasant in itself, morally pleasant and morally useful. Marriage is monotonous, but there is much, we trust, to be said in favor of holy wedlock. Living in the same house is monotonous; but three removes, say the wise, are as bad as a fire. Locomotion is regarded as an evil by our Litany. The Litany, as usual, is right. "Those who travel by sea or land" are to be objects of our pity and our prayers; and we do pity them. I delight in that same monotony. It saves curiosity, anxiety, excitement, disappointment, and a host of bad passions. It gives a man the blessed, invigorating feeling that he is at home: that he has roots deep and struck down into all he has, and that only the Being who will do nothing cruel or useless can tear them up. It is pleasant and good to see the same trees year after year—the same birds coming back in spring to the same shrubs—the same banks covered with the same flowers. That man who offered twenty pounds reward for a lost carpet bag full of old boots was a sage, and I wish I knew him. Why should we change one's place more than one's wife, or one's children? Is a hermit crab, slipping his tail out of one strange shell into another, in the hopes of its fitting him a little better, either a dignified, safe or graceful animal? No. George Reddler was a true philosopher—

"Let vules go searching var and nigh,
We bides at whum, my dog and I."

—*Frazer's Magazine.*

WE are all naturally benevolent when no selfish interest interposes, and when no advantage is to be given up. We can all pity distress when it lies complaining at our feet, and confesses our superiority and happier situation. But I have seen the sufferer himself become the object of envy and ill-will as soon as his fortitude and greatness of mind had began to attract attention, and to make the envious person feel the superiority of birth over good fortune.

IMPORTANCE OF SWALLOWS.—As a proof of the valuable services rendered by swallows, it is estimated that one of these birds will devour 900 insects in a day; and when it is considered that some insects produce as many as nine generations in a summer, the state of the air but for these birds may be readily conceived. One kind of insect alone might produce 550,970,489,000,000,000 of its race in a single year.

WHY are seeds when sown like gate posts? Because they are planted in the earth to prop-a-gate.

A MANUFACTURER and vender of quack medicines recently wrote to a friend for a strong recommendation of his (the manufacturer's) "Balsam." In a few days he received the following, which we call pretty strong: "Dear Sir—The land composing this farm has hitherto been so poor that a Scotchman could not get his living off it, and so stony that we had to slice our potatoes and plant them edgeways; but hearing of your balsam, I put some on the corner of a ten-acre field surrounded by a rail fence, and in the morning I found that the rock had entirely disappeared, a neat stone wall encircled the field, and the rails were split into firewood and piled up symmetrically in my backyard. I put half an ounce in the middle of a huckleberry swamp—in two days it was cleared off, planted with corn and pumpkins, and a row of peach trees in full blossom through the middle. As an evidence of its tremendous strength, I would say that it drew a striking likeness of my eldest son out of a mill-pond, drew a blister all over his stomach, drew a load of potatoes four miles to market, and eventually drew a prize of ninety-seven dollars in a lottery."

A BIRD-COLLECTOR died in Paris lately. A trait of sagacity on his part was to insure the attendance of the jackdaws of the Louvre to his funeral, which he effected in the following manner: His residence was on the Quai Voltaire, and for the last seven years of his life he always placed on his balcony, exactly at three o'clock in the afternoon, several plates of meat cut in small pieces. The jackdaws were most punctual in their attendance. He had, therefore, only to give directions in his will that his funeral should take place at three precisely. The jackdaws came that day as usual—and if he had wished to have real mourners, he certainly succeeded; for, as their usual meal had not been prepared, they were loud in their lamentations, much to the amazements of all the friends who attended his obsequies.

IN Venango County, Pennsylvania, is a queer fellow by the name of Tom Barton, who drinks and stutters, and stutters and drinks. He has a brother Jim, who is glib of tongue, and was a great liar—we hope he has reformed, for he professed to become a good man, and was baptized in the river. It was a bitter cold day in winter, and the ice had to be cut to make a place for the ceremony. Tom was in attendance, and close by. As Jim came up out of the water, Tom said to him:

"Is it c-c-c-cold, Jim?"

"No," replied Jim; "not at all."

"D-d-d-dip him again, m-m-minister," cried Tom; "he -l-l-lies yet!"

THE word Timbuctoo, supposed to be rhymeless, was once mated by a London professor of mathematics, who was challenged to find a rhyme for it, in the following:

"If I were a cassowary,
On the sands of Timbuctoo,
I would eat a missionary,
Skin, and bones, and *hymn-book too!*"

"CAN you tell me, Billy, how it is that the chanticleer always keeps his feathers so sleek and smooth?" "No." Well, I'll tell you. He always carries his comb with him.

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Premiums.—We have sent of all the grape, vines flower seeds, books, etc., to those who are entitled to them for obtaining subscribers to the *Genesee Farmer*. We hope, and believe, they will give satisfaction. If any fail to receive them, we hope they will inform us. We are always happy to correct mistakes.

Notes on the Weather from March 15th, to April 16th, 1862.—The mean temperature of the first half of March was near the average, but of the second half was 3° below the average, so that the heat of March was 1.5° below the mean for 25 years. The month was rather pleasant—the winds not strong, storms not severe, and the heat not variable, as usual; cool, but not severely so. The coldest was 17° on the 26th, and the hottest, 49° on 27th. No sleighing since the 10th, and the ice left the Genesee on the 17th at its mouth, carrying one or two vessels into the Lake, without doing much damage.

A robin was seen on the 16th, and more soon followed with other spring birds.

On the evening of the 30th, a thunder shower of snow and rain of great extent. Here the lightning was brilliant at 9½ in the northeast; the shower was heavy at Auburn, and further east; at Pittsfield, Mass., was splendid. It also occurred in Medina county, Ohio, on the same evening.

The *ice-shower* in Niagara and Erie counties on the 15th was great in Herkimer county; very slight here, but splendid in some parts of Ohio.

The snow and rain give 5.15 inches of water for March. The snow had disappeared in the open fields, but along north and south fences and in the woods, it abounded to the close of the month. In the eastern and northern parts of the State, and in Massachusetts and the north portion of New England, the snow is quite deep at the close of the month. The manufacture of maple sugar has thus been made more laborious, and the coming of warm weather will lessen the expected amount. The month has been pleasant for business.

April began rather cool, and so continued, or rather colder, till the 13th; the last three days being quite warm and spring-like, giving us 70° at noon on the 14th, and a mean of 57°, and 58° on the 15th for the mean. The half month has been regularly cool, and we have held it to be very cold, owing perhaps to the snow on the ground and with so much wind from the Lake from the snow of Canada. Yet the average, 39.6°, was only 1.4° below the mean for 25 years. This is 6° lower than the average of this half of April in 1858. On the 7th the temperature was, at sunrise, 22°, and at 7 A. M., 26°, and very little higher all day, and at eve down to 26° again. On this and the 8th snow did not melt, nor the earth thaw, in the shade.

Little rain and snow have fallen in the fortnight; but as the snow, now gone chiefly, except in the woods, has melted slowly and the water passed into the earth, the springs are amply supplied. The dust is flying in our streets. The red maple was in full blossom on the 13th in warmer situations, but only stamens in them. Peaches in flower at Yorktown, Va., on the 11th.

The uniform weather of winter and of March is held to be very favorable to the wheat, and fruit trees have escaped any cold that would destroy their flower buds.

The snow and rain of the 7th to the 9th was heavy on the Potomac, and very trying to the army at Yorktown and further south: snow deep at Philadelphia and over Pennsylvania, and on mountains of Virginia; much less at New York; here we had northeast wind with fall of barometer, and snow expected, but no rain or snow.

Indeed, the storm did not cross the Alleganies in the State of New York, if it did at the South. This storm began at Washington just after noon the 7th; at no time windy, but much rain and snow for parts of three days.

The season is late; grass just shows itself; crocus in yards has been in bloom for a week; such warm days as the 15th will soon cover the earth with the dress of spring.

At the last moment, we hear of the great depth of snow on the ground in the north part of the State and over Vermont and New Hampshire, and the mountains and hills and plains, too, of parts of Massachusetts.

BEARDSLEY'S HAY ELEVATOR.—One of the leading characteristics of American farmers is the readiness with which they avail themselves of mechanical contrivances for lessening the heavy labors of the farm. Allusions to machines for cutting grain are met with in the writings of the ancient Romans; and in England, BOYCE, SALMON, SMITH, BELL and others invented and used reaping machines early in the present century; but it was reserved to America first to make the reaper generally available in the harvest-field.

At the present time, the greater bulk of our grass and grain is cut by machinery, and the period is not distant when the dreaded labor of gathering and harvesting our crops will all be performed by horse-power.

In fact, this is now the case on many farms, and at this time especially, when so many have left the peaceful pursuits of agriculture and taken up the sword and spear in defence of the laws and liberties of our beloved land, is it obligatory on those of us who remain at home to adopt every mechanical invention that expedites and cheapens the labors of the farm. One of the best of these inventions is the HAY ELEVATOR.

Machinery has long been used for unloading hay. On the farm of DAVID LEAVITT, of Great Barrington, Mass., we have seen an apparatus that would unload hay at the rate of half a ton per minute. But it was too cumbrous for general adoption. What we need is something *cheap* and *simple*, that can be used on every farm. Such a one we believe is the Hay-fork invented by LEVI A. BEARDSLEY, of South Edmeston, Otsego county, N. Y. We are satisfied that its use will save much hard labor, and that it can not be too generally adopted on American farms. C. D. FARMAN says he stacked fifty tons of hay with it last season, in stacks thirty feet high, and the fork lifted the hay as fast as three men could mow it away. We have received from Mr. BEARDSLEY a circular giving a full description of his Fork, with directions for its operation. Mr. BEARDSLEY will send one of these circulars to all who desire them.

Mr. B. informs us that he has sent one of his machines to Prince ALBERT'S Model Farm at Windsor, England, and also one to LOUIS ADAMS, of Moscow, Russia. It will also be exhibited at the World's Fair in London, and we doubt not it will attract considerable attention, and add another triumph to American ingenuity.

CHINESE SUGAR CANE SEED FREE.—I. W. BRIGGS, of Macedon, Wayne Co., N. Y., writes us that he will send any of the subscribers to the *Genesee Farmer* a package of pure sorghum seed on a receipt of a one cent envelope with the address of the party wishing the seed written on it. Send for a package.

The Markets.

OFFICE OF THE GENESEE FARMER,
ROCHESTER, N. Y., April 24, 1862.

WHEAT has fallen about 8 cents per bushel since last month's report. It is now about the same price as last October, and from 8 to 10 cents per bushel less than at the commencement of the present year. Millers and speculators expect a rise. Perhaps the wish is father to the thought. Future prices depend on so many contingencies that we can not hazard an opinion at present. The wheat crop in England is very promising and prices declining. In this country, so far as our correspondents have informed us, winter wheat generally looks well, and fully an average breadth has been sown.

We have had rather a mild winter, but the spring opened late. Very little plowing has yet been done in this section. But there is still plenty of time to put in the crops in good condition.

No change in the price of barley.

Oats are a shade better.

Corn is about the same as last month. It is 5 cents per bushel lower than at the commencement of the year. In fact, all grains are lower than they were four months ago.

Farmers may expect good prices for their wool the present season, though some of the dealers think the clip will be unusually large and the demand but moderate. At all events, a large advance on last summer's prices may be looked for with confidence.

NEW YORK CATTLE MARKET.—In the New York market April 16, there were only 3,517 beeves, or 1,600 less than the previous week, and 1,000 head below the average of last year. Over 200 head were taken by Government, and the remainder sold rapidly at improved rates. One fine drove came from Virginia. Two-thirds of the cattle hailed from Illinois, and were of excellent quality.

There was a large supply of sheep, and prices declined 50 cents per head. Country dressed mutton sold at 3½ to 6 cents per lb., according to freshness and fatness.

Milch cows are in little demand, and the market is overstocked.

Good calves sold at 4 to 4½ cents per lb., live weight.

Heavy fat hogs were in somewhat better demand.

Horses are in better demand. Some first-class coach pairs sold at $800@$950 per pair. Good single horses, for family or road, $200@$300 each; those with speed, $300@$450. First-class draft horses, $200@$225; second-class, $150@$175. Canadian ponies, $60@$116 each. Railroad and omnibus horses, $110@$125.

Clover Seed is in better demand. It sells in this city at $4.87½ to $4 75.

Eggs are plenty at 9@10 cents per dozen.

Butter 16@17 cents per lb.

SEEDS FOR THE MONTH OF MAY.—We would call the attention of our readers to the advertisement of Messrs. J. M. THORBURN & Co., of New York. The new postage law allowing seeds to be sent by mail for one cent per ounce (instead of six cents, as previous) affords an excellent opportunity to get the choicest and best seeds at reasonable rates. The Messrs. THORBURN have one of the largest and best seed establishments in the United States, and anything that is ordered from them will give satisfaction.

THE LADIES' DEPARTMENT.—Some of our brethren of the press fail to give us the usual credit for articles copied from the *Genesee Farmer*. Especially is this true as regards the "Ladies' Department." The articles for this department are written expressly for the *Genesee Farmer* by a lady of experience, and we are not surprised to see them extensively copied. We do not object to this in the least, but simply ask that proper credit be given.

SELF-RAKING REAPER.—SEYMOUR, MORGAN & ALLEN, of Brockport, N. Y., manufacture an excellent self-raking reaper. See their advertisement in this number.

THE GRAIN TRADE OF CHICAGO.—The following facts are obtained from the recent Report of the Board of Trade of Chicago. They show the movements in the articles mentioned at that port for 1861. The grades of wheat are: No. 1 white winter, of which 57,750 bushels were shipped; No. 2 white winter, 47,250 bush. shipped; No. 1 red winter, 374,850 bush. shipped; No. 2 red winter, 546,950 bush. shipped; rejected winter; 82,110 bush. shipped; extra club, 350 bush. shipped; Northwestern club, 238,000 bush. shipped; No. 1 spring, 6,772,718 bush. shipped; No. 2 spring, 7,006,716 bush. shipped; rejected spring, 1,813,588 bush. shipped. Total, 16,940,282.

The quantity of corn inspected was 25,261,123 bushels. Of this, 24,900 bushels were pure white, 452,300 pure yellow, 22,348,582 mixed, 2,266,988 rejected. It is estimated that, in the wheat and corn given above, the farmers lose over $500,000 in not properly cleaning the first and in unnecessarily mixing the latter. Either pure white or pure yellow corn is held from one to three cents higher in the market than the mixed.

The quantity of rye inspected was 487,649 bushels. Of this, 409,619 bushels were No. 1, 9,800 No. 2, and 68,050 rejected.

The number of bushels of oats inspected was 1,072,556. Of this, 962,706 bushels were No 1, 14,950 No. 2, and 94,000 rejected.

The quantity of barley inspected was 108,945 bushels. Of this, 5,250 bushels were No. 1, 82,650 No. 2, and 20,555 rejected.

The capacity of grain storage in the city is estimated at 45,970,000 bushels. There are fourteen elevators in operation, with a capacity for receiving and shipping daily 675,000 bushels. They can ship daily, when in store, 1,750,000 bushel. This capacity for shipping will soon be added to by at least 300,000 bushels daily by two other houses.

FARMERS, WRITE FOR YOUR OWN PAPER.—The editor of the Ohio *Field Notes* thus eloquently urges his readers to write for the paper:

"Give us field news, stock news, horse talk, cattle talk, hog talk, bear talk, turkey talk, fox talk, duck and goose talk, always giving preference to the more useful and substantial items in the above list. Write early, write often, and continue to write.

Take up your rusty pens, O! ye Cattle Kings, ye Horse men, ye Shepherd of hill and plain, ye Dairy men and women, ye Wheat growers, Corn growers, Grass growers, ye Apple Kings and Garden diggers, ye men and women of the rose tree and the pansy bed, ye lovers of the grape and the juices thereof, ye Nimrods of the bush and the saddle, ye Women of the gridiron and the frying pan, who know the mysteries of broiled quail and lordly steaks, and such generous dishes as make us stout and good natured."

PRETTY GOOD.—A lady friend of ours was reading over the list of Premiums on the last page of the March number of the *Genesee Farmer*. Coming to No. 8, where for eight subscribers we offer to send the "Horse and his Diseases," she remarked, "I should prefer the horse without the diseases."

MOTHS.—A correspondent of the London *Field* recommends tallow candles, (common,) done up in paper, and put in the sack or drawer with cloths, to prevent moths destroying the cloth.

Literary Notices.

NOTICE TO QUIT. By W. G. WILLS, author of "Life's Foreshadowings." New York: HARPER & BROTHERS. ADAMS & DABNEY.

One of the fifty cent novels which are being constantly issued by this well known publishing house, and neither much better or worse than the average.

THE STEP-MOTHER. By the author of the "Heir of Redclyfe." D. APPLETON & Co.

This, like all Miss YONGE's novels, is interesting in its peculiar style, and has the charm of teaching a pure morality and a practical religion.

AIDS TO FAITH; A Series of Theological Essays. By several writers. Edited by WILLIAM THOMPSON, D. D. New York: D. APPLETON & Co. STEELE & AVERY.

This is an answer to the famous "Essays and Reasons." Equally well written with the book to which it replies, it will probably not meet with half the sale, as truth is always stale, while even cast-off errors have a charm to a certain class of minds, which includes a large proportion of the reading public. If faith, once shaken, can be restored by logic, the skeptic would find here an excellent refutation of his doubts concerning miracles, prophecy, inspiration, and cognate subjects.

SPARE HOURS. By JOHN BROWN, M. D. Boston: TICKNOR & FIELDS.

One of the most fascinating books that has been published this season. "Rab and his Friends" would redeem a stupid book, but every article in this is worth reading, as well as too interesting to leave unread.

RELIGIO-MEDICI. A Letter to a Friend, Christian Morals, Urn Burial, and other papers. By Sir THOMAS BROWNE, Kt., M. D. Boston: TICKNOR & FIELDS.

A republication of an old book, which has a quaint charm of its own—an exceedingly pleasant companion for a thoughtful leisure hour.

TREE PEDDLERS.—B. SMITH, of Cuba, Missouri, in an article in the St. Louis *Valley Farmer*, advises farmers to "set the dogs on the tree peddlers when they come around." Dishonest tree peddlers are a great nuisance, and, while we can not endorse Mr. SMITH's recommendation, we could wish that farmers would deal only with men who sell for respectable nurserymen. There are many such—men who sell good trees and deliver them according to agreement—but it is not likely that they are often found in Mr. SMITH's neighborhood!

PACKING EGGS FOR LONG JOURNEYS.—The best substance for packing eggs that have to be sent long distances by rail or otherwise, especially if intended for sitting, is the *husks of buckwheat*. Bran and grain are full of dust, and should not be used unless each egg is wrapped in paper. These substances also are apt to pack, and the package becomes one solid mass. There is no elasticity, and the constant jars break the delicate membrane which suspends the yolk in the shell, and the egg is "killed."

AGRICULTURE THE GREAT INTEREST OF THE NATION.—According to the census of 1850, the total capital of the United States was about $6,000,000,000. Of this sum, 5,000,000,000, or five-sixths of the whole amount, was invested in agricultnre. The late Prof. JOHNSTON, of Scotland, estimated that nine-tenths of all the fixed capital in the world is embarked in agriculture.

CHAPPED HANDS.—A correspondent informs us that he finds equal parts of lard and camphor, well mixed, a cure for chapped hands.

Inquiries and Answers.

BEETS FOR SUGAR.—(J. H. COLDWELL.) The "common blood beet" is not grown for this purpose. The Silesian sugar beet is the variety that is grown for the manufacture of sugar.

ILLINOIS COFFEE.—(JOHN SHELTON.) We would not advise you to purchase any of this so-called coffee. More recent information indicates that there is considerable humbug about it.

UNDERDRAINING AN APPLE ORCHARD.—(F. R.) Put a drain between each row of trees, say from three to four feet deep. Drain tiles or pipes are better and cheaper than stones. If you use stones, it will be necessary to cut the drains wider.

WINTER APPLES.—(J. B., *Pennsylvania.*) Our nurserymen here can probably furnish you apple grafts, if applied to. A good selection of winter varieties in your locality should contain Golden Russet, Yellow Belleflower, Smith's Cider, Fallenwalder, Rhode Island Greening and Baldwin.

WHAT SHALL I DO WITH AN EGG-EATING HEN?—(JOHN WILLIAMS.) Give her plenty of food—not too much of one kind of grain, but a little of several kinds, such as wheat screenings, barley, rye, oats and Indian corn, with a little fresh meat. If after this she eats her eggs, put her—in the pot with a piece of pork.

WORMS INFESTING THE BLACK CURRANT.—(J. H. F. *Pittsburg.*) It is true as you state, although probably new to most of our readers, that the black currant, in some localities, is infested with a kind of span worm (some species of *Abraxas*) which feeds upon the leaves. During the present season, we shall endeavor to procure specimens of this insect in its various stages, and will then speak of it more fully.

GRAFTING WAX.—(J. B., *Drayton P. O., C. W.*) For indoor grafting, or for saturing strips of cloth to be used outside, the following composition will be found very good: 1 lb. tallow, 2 lbs. beeswax, and 5 lbs. rosin, melted together.

For grafting large trees, where the wax is to be applied directly to the graft, a mixture about in proportion of 2 lbs. tallow, 3 lbs. beeswax, and 3 lbs. rosin, will be found to work well.

MAHALEB CHERRY FROM LAYERS—DOUBLE WORKED PEARS.—(R. H. M., *Pulmyra, Ind.*) We think your experiment of growing mahaleb stocks from layers will prove a failure; if not so, please inform us.

When a dwarf pear tree is desired of some variety which does not succeed well on the quince stock, the stock is first worked with a sort which forms a strong union with it, and afterwards the new pear shoot is budded or grafted with the variety which is to form the tree.

OSAGE ORANGE FROM CUTTINGS.—(R. B., *St. Thomas, C. W.*) We have had no experience in growing Osage orange from cuttings. A gentleman in this city informs us that some green cuttings clipped from the hedge at the first summer pruning, that were accidentally nearly covered up, were found after a few weeks to have many among them that were well rooted. A friend of his says, also, that he has succeeded in a measure in striking ripe cuttings.

There has never yet existed a necessity here to employ this mode of progagation, since the seeds are to be procured so cheaply.

SMUT IN WHEAT.—(J. H., *Buffalo, N. Y.*) There are several ways of preparing seed wheat to prevent smut. The spores of the smut adhere to the seed wheat, and the object is to destroy them before sowing the seed. The common way is to moisten the seed with fermented chamber lye, and then dry it with quick lime. The spores of the fungus contain considerable oil, and the ammonia of the lye and the lime attacks this oil, forming a kind of soap and destroying the vitality of the smut. An equally effective remedy is to wash the seed wheat with a solution of blue vitriol (sulphate of copper). For each bushel of seed, dissolve three or four ounces of blue vitriol in about one quart of hot water. Spread the wheat out on a floor, about six inches thick, and, when cool, sprinkle the solution equally over it, and then mix thoroughly with shovels till every grain is moistened. Old wheat will require a little more water. The seed will be ready to sow in two or three hours, though it is better to allow it to remain a day or two before sowing. When treated in this way, lime should not be used, as it will decompose the sulphate of copper and do harm rather than good.

MADDER SEED.—Can any one tell me where I can get madder seed or sets, price, etc.?—E. WARE, *Hancock, N. H.*

JAVA WHEAT.—Can any of the readers of the *Genesee Farmer* tell me where I can procure some Java wheat seed?—GEO. N. PEACOCK, *Porter's Corners, Saratoga Co., N. Y.*

HARD SOAP.—Will some one, through the *Genesee Farmer*, give us a receipt for making hard soap. It would please me, and probably many others.—D. E. DAVIS, *Dundaff, Pa.*

COTSWOLD SHEEP.—I wish to buy a Cotswold ram the coming summer. Will those who have one from 8 to 24 months old tell me the price, etc.—S. AMSBAUGH, *Domestic, Williams Co., Ohio.*

AN OLD ORCHARD.—I have purchased a farm which has an old orchard on it that has not been trimmed for some time. What is the best course to pursue in such a case?—G. R. LAWSON, *Murray, C. W.*

CRANBERRY CULTURE.—Your subscribers in this vicinity would esteem it as a favor if some one would give us information respecting the culture of cranberries, the most desirable varieties for market, etc.—M. GUERNSEY, *East Cobbleskill, N. Y.*

HUNGARIAN GRASS AND FLAX.—I should like to obtain some information in regard to the cultivation, product, value as food, proper time for cutting, etc., of Hungarian grass. Probably some of the readers of the *Genesee Farmer* can give the desired information.

Also, some information in regard to cultivation of flax, produce of straw and seed per acre, and also the amount of clean flax, with the best mode of preparing it, proper time and best plan for rotting, for cottonizing purposes.—B., *Evansville, Ind.*

UNDERDRAINING AN ORCHARD.—Will some of your correspondents who have had experience give me some instructions about underdraining. I have planted some apple trees on a piece of ground a little rolling or descending, so that some fall may be obtained. The ground is not wet, but I have been led to think that underdrain-

ing would improve it. My trees are about 30 feet apart. Will it be necessary to make a drain for every row, or will a less number be sufficient? Will there be need of cross drains? How deep should the drains be made? I intend to put in small stone, so as to allow the water to filter through. How small should the stones be broken for this purpose? How deep should the drains be made? To what height should they be filled with stone? What precaution will be necessary to prevent the soil from falling or washing in among the stones, so as to obstruct the passage for water?—T. R., *Crawford Co., Pa.*

LEACHED ASHES.—(ROBERT MACAULEY.) They are good for almost any crop on light land.

UNLEACHED ASHES FOR CORN.—(R. M., *Hamilton, C. W.*) Apply a handful to each hill after the corn is well up, before the first hoeing.

TO CLEAN FOUL CASKS.—(R. T.) Fill them with meal or bran and water, and let them stand until fermentation takes place. The casks, it is said, will then be sweet, and the mixture will be better than before as food for swine.

GRINDING SUGAR BEETS.—Can sugar beets be ground in a common cider mill, and the juice be boiled down to sugar or sirup in the same way as maple sap.—C. W. D.

They can. But will some of our readers, who have had experience, favor us with an article on this subject?

HOEING AND HARROWING WHEAT IN THE SPRING.—(H. B. H.) There can be no doubt that hoeing wheat in the spring is very beneficial. The only question is, "Will it pay?" Try half an acre or so and determine this question for yourself. We have known wheat benefitted materially by harrowing it early in the spring.

COPPERAS FOR SEED CORN.—(WM. HAINES.) The object of using copperas for seed corn is to prevent worms, squirrels, chip-munks, crows, &c., from eating the seed. It has no effect on the cut-worm and other insects that eat the blade. One pound of copperas is sufficient for a bushel of seed. Dissolve it in warm water sufficient to cover the seed, and let it soak for twenty-four to thirty-six hours. If necessary, dry it with plaster, but not with lime, as the latter would decompose the copperas.

A COW SUCKING HERSELF.—(A Subscriber.) Many remedies have been published in back numbers of the *Genesee Farmer*.. The last we have noticed is to split the cow's tongue with a sharp knife, about two inches, making two equal parts. Give her soft food for two or three days, till the tongue heals, when she will be as well as ever and effectually cured.

Another remedy is to smear the teats with grease and dust, then with cayenne pepper. A few dressings, it is said, will effect a cure.

ORNAMENTAL VANES FOR FARM BUILDINGS.—As your paper is designed for improvement in rural affairs, I would offer a suggestion that you publish, in a future volume of the *Farmer*, a number of designs, with illustrations, for an ornamental *vane*, to be placed on the ridge of the wagon-house, as that is generally the most conspicuous of out-buildings. The designs should embrace some variety from cheap wooden structures, or mostly so, to more costly styles. Those of wood should have the spire turned in a lathe and fastened on the building by cutting through the ridge-board and fastened on the inside. Those of metalic materials should have a base of cast-iron, with four legs, spiked to the roof on the ridge and connected with the lightning-rod. These would improve the appearance of out-buildings very much. You could procure the designs in no better way than by offering a prize similar to those formerly offered for prize articles, so that you could procure a number of different styles.—CYRUS BAKER.

We will cheerfully give a copy of the *Rural Poetry of the English Language*—a three dollar book—for the best essay on this subject, with illustrations.

SUCKERS ON APPLE TREES.—(E. WALKER.) If on the body or limbs of the trees, strip them off as fast as they are formed. If not allowed to grow too large, a knife will be unnecessary, as they can be stripped off quite easily. Suckers at the base of the trees are less easily destroyed. We know of no other way than to cut them off as fast as they appear, and keep cutting. Probably some of our readers can give us a better plan.

AMMONIA, SUPERPHOSPHATE, &C.—In what form is ammonia, or sulphate of ammonia, or superphosphate of lime, to be bought for manure? These terms are puzzling to a beginner.—R. M., *Hamilton, C. W.*

Ammonia is a gas, lighter than the atmosphere. It is an alkali, and unites with sulphuric acid, forming sulphate of ammonia. This is a salt, quite soluble, but not volatile. It can be obtained in New York for seven cents per lb.

Superphosphate is made from bones. It is, in fact, *soluble* bones. The bones are made soluble by the use of sulphuric acid. RHODES' superphosphate, advertised in this number, is one of the best articles in market.

"IS THERE ANY CURE FOR HEAVES IN HORSES?"—(JAS. WEST.) There is probable no absolute *cure*. But much may be done to help the horse. Feed him on cut hay, and mill-feed *moistened* in water. Work him gently, and never let him drink more than a pailful of water at a time. At this season of the year give him a tablespoonful, every other day, of a mixture of equal parts by weight of saltpetre, sulphur, antimony and powdered liquorice-root. It is one of the best "condition powders" we have ever used.

SOAP FOR SEED CORN.—(A Canadian Subscriber.) Mr. MARSHALL'S plan of preparing his seed corn, as given in the *Genesee Farmer* of last year, is as follows:

"Heat some soap in a kettle, and then pour the hot soap on the corn. It is better to have the corn in a large kettle, (not the kettle in which the soap is heated,) as it can be stirred better than in a tub. Stir the corn at the same time the soap is poured on, till all the kernals are smeared with it. Then add as much plaster as will cause the kernels to separate, and nicely dry the seed. His object is to get as much soap and plaster to adhere to the seed as possible. He does not prepare more seed at a time than can be used in half a day. Keep it standing in the shade. If exposed to the sun it will dry, and cause the soap and plaster to scale off. The soap and plaster draw the moisture, and cause the seed to germinate and come up quickly, and the plants look healthy and vigorous."

BEET ROOT SUGAR.—In the March No. of the *Genesee Farmer* I find an article on the "Cultivation of the Beet Root for Sugar," and being well satisfied that the farmers of Canada, in many localities—myself among the number—would do better to change their practice in farming (as many are doing), the inquiry with me is, Would not beet root sugar-making be preferable to the cultivation of flax, which is so often urged upon us? If the figures in the article in question are nearly correct, I am confident it would, and have determined upon trying it in a small way, if I can get the right kind of seed and necessary instructions in the art of manufacturing the sugar. Knowing of no better way of obtaining the requisite information,

I write you, hoping that you will be able, through your paper, to inform your numerous readers where the true seed can be obtained, and also the right directions for making the sugar, with the implements needed in its manufacture.—DAVID BASTADO, *Princeton, C. W.*

You can get true Silesian beet root seed from J. M. THORBURN & Co., New York. Your other inquiries shall be attended to in a future number.

SNAILS, SLUGS, &c.—Can you inform me of a good and sure way of getting rid of the snail or slug? They are getting to be quite an annoyance on cabbages, tomatoes, &c., &c. I can not afford the expense of a galvanic battery for each vine and plant, and have used, with some success, lime and plaster and ashes, one at a time, dry and sprinkled carefully on the ground so as not to touch the fruit.—LEWIS DE VOLK.

CHINESE SUGAR CANE SEED.—(S. ROBERTS.) Sorghum seed was mostly obtained from the Southern States. The supply is of course cut off. We must now depend on seed imported from France. It is thought that much spurious seed will be thrown on the market. B. K. BLISS, of Springfield, Mass., in an advertisement in this number of the *Farmer*, states that he has imported a quantity from the well-known house of VILMORIN & Co., of Paris. Mr. BLISS is an honorable and reliable man, and we have no doubt his seed is genuine. At all events we intend to use it ourselves.

LARGE AND SMALL SHEEP.—(T. T.) For mutton the large sheep, other things being equal, are the most profitable. For wool the reverse is true.

It has been proved that, as a rule, sheep consume food in proportion to their live weight; and it has also been demonstrated that Cotswolds [large sheep] fatten more rapidly from food consumed than the South Downs [small sheep.] On the other hand it has been shown that small sheep produce more wool, in *proportion to live weight*, than large sheep. And, of course, it follows that, when wool is the only object, the small sheep are the most profitable—they produce more wool in proportion to the food consumed.

ITALIAN RYE GRASS.—(A. P.) When sown alone, from 35 to 40 lbs. of seed are required per acre. The seed weighs from 15 to 18 lbs. per bush. It can be sown either in the spring or fall. As a general rule it lasts but two years in perfection, although there are instances in which five or six crops have been mowed in successive seasons; but it is probable that the land was resown from the seeds dropped from the crop, as it sheds its seeds very easily.

It delights in rich, deep soil. The land can not be too wet. No crop will bear so much forcing. It is of all grasses the best for irrigated meadows. It has not been sufficiently tried in this country to warrant us in speaking more fully of its merits. We hope you will give it a trial, and report the result.

Special Notices.

RHODES' SUPERPHOSPHATE.—THE STANDARD MANURE.—Manufactured under the supervision of the eminent manufacturing and analytical chemists, ROBERT B. POTTS and FREDERICK KLETT. The Sulphuric Acid is produced on a large scale at the works at Camden, N. J.

Guaranteed perfectly pure and free from all adulteration. Dr. EVAN PUGH, President Penn. Farm School, in his Report on Artificial Manures, published in *Country Gentlemen* March 27th, 1862, says: "RHODES' is the cheapest American superphosphate, "and if Mr. RHODES will sell under legal guarantee an article to "contain even 14 or 15 per cent of anhydrous phosphoric acid in "combinations soluble in water (with ten minutes boiling), his "manure would deserve unqualified recommendation as one of "the very best superphosphates manufactured in the world, and "very much better than any manufactured in this country."

The following report of analysis of *one thousand* (1,000) tons RHODES' manure, made by G. A. LIEBIG, shows even higher results than Dr. PUGH requires;

BALTIMORE, February 28, 1862.

MESSRS. B. M. RHODES & Co.—*Gents:* I have analyzed the two samples of RHODES' manure which were averaged from a lot of one thousand (1,000) tons at the works, and sent to me by Messrs. POTTS and KLETT.

Sample No. 1 contains of phosphoric acid soluble in water 16.84 per cent., equal to 37.75 of bi-phosphate of lime.

Sample No. 2 contains 16.44 per cent., which is equal to 37.10 of bi-phosphate of lime.

Both of the samples came fully up to the standard qualities of your Superphosphate. Very respectfully,

G. A. LIEBIG, Ph. D.

Agriculturists and dealers apply to B. M. RHODES & Co., office 82, South street, Baltimore. Also, HENRY E. MORING, General Agent for New York and New England, 97 Pearl street, near Hanover Square, New York.

THE FOLLOWING REPORT was made at the late Fair held at Utica, N. Y., upon the merits of Sewing Machines. The Report will be interesting to those inquiring for the best Family Sewing Machine:

"We come now to the last article on our list—specimens of "Machine Sewing. We confess our great hesitation in deciding "upon their merits, where all are so well done; but feel assured "that our judgment must meet with approval when we award the "First Premium to No. 971, W. S. Taylor (Grover & Baker's Machine), considering the variety of articles made up of different "materials, exhibited there. To No. 806, two machine-made "shirts, Mrs. Gallup (Wheeler & Wilson's Machine), we would "recommend the Second Premium. In justice to our decision, "we would no ice the fact that all the specimens of work done on "the Wheeler & Wilson's Machine are upon plain, heavy fabrics, "which are not considered by the ladies so good a test of the "powers of a machine designed for family use, as when lighter "materials are neatly made up by a skillful operator."

MRS. SELDEN COLLINS, *Ch'n*,
MRS. C. S. BENNETT,
MRS. GEORGE LANE,
MRS. G. O. GREENHILL,
Committee.

ADVERTISEMENTS.

A FEW short advertisements of interest to farmers—and only such—will be inserted in the *Genesee Farmer* for twenty-five cents a line, or $2.50 per square, each insertion, payable in advance. To secure insertion, they should be sent in by the 15th of the previous month. The *Farmer* has large lists of subscribers in *every State and Territory, and in all the British Provinces.* (It has nearly 5000 subscribers in Canada West alone.) There is no better or cheaper medium for advertising everything of general interest to rural residents in all parts of the United States and Canada.

We will also insert a few "Special Notices," if appropriate to our columns, at fifty cents a line.

MOLE PLOWS—By J. DUNHAM, Ithaca, N. Y 3—tf

MARBLEHEAD CABBAGE SEED.

STONE MASON Cabbage seed, 25 cents per oz., 75 cents four oz., $2.67 per lb., postpaid by me. HUBBARD SQUASH, the purest grown, 12 cents per package, $1 per lb.

☞ CIRCULARS, containg Priced Lists of every variety of Garden Seeds, gratis. JAMES J. H. GREGORY,
Marblehead, Mass.

TOM THUMB PEAS.

I WILL send, for 25 cents, Six Ounces of the above Peas to any Postoffice address in the States, by mail, postage paid. This Pea grows only eight inches high, and is very early and prolific. J. RAPALJE, Genesee Seed Store,
Rochester, N. Y.

PREMIUM

Hay Elevator.

FOR CIRCULAR, address

L. A. BEARDSLEY,

SOUTH EDMESTON, OTSEGO CO., N. Y.

5 3t **Price, $15.**

AGRICULTURAL SEEDS BY MAIL.

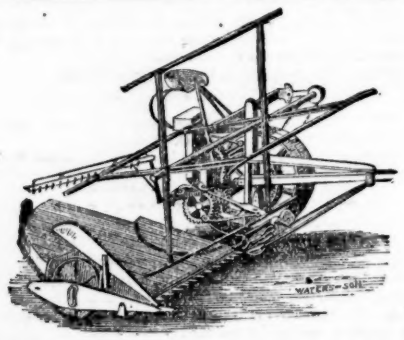
THE following reliable seeds will be mailed to any address at the prices affixed:

	Per oz.	Per ¼ lb.
Mangel wurzel, long red,	8c.	30c.
" " yellow globe,	8	30
Carrot, Long Orange, extra deep color,	10	40
" White Belgian,	10	40
Ruta Baga, Skirving's purple top,	8	30
" " Laing's Improved,	8	30
Sugar-Beet, true,	8	30
Chicory, the great substitute for coffee,	10	40
Onion, large red Wethersfield,	10	40
" yellow Danvers,	15	50

Those who wish for larger quantities will be supplied at the lowest market prices.

Our Descriptive Catalogues of Vegetable and Flower Seeds mailed to any address on receipt of a three-cent stamp.

B. K. BLISS, Springfield, Mass.



The New York Self-Raking Reaper and Mower,

IS the best and most economical Harvester of Grain and Grass yet invented. Only one hand is necessary to manage it, and it requires less labor to bind after it than after the best hand-rakers.

It is simple and durable, not liable to get out of order, and the saving in labor by the self-rake alone will pay for the entire machine before it is worn out.

All the gearing is hung on an iron frame, and the cutter-bar is made of steel.

For Circulars and other information, apply to the manufacturers. SEYMOUR, MORGAN & ALLEN.

May—2t Brockport, Monroe Co., N. Y.

EMPLOYMENT.—A NEW ENTERPRISE. The FRANKLIN SEWING MACHINE CO. want a number of active Local and Traveling Agents. A liberal salary and expenses paid, or commission allowed. Address, with stamp, HARRIS BROTHERS, Boston, Mass. (*Clip this out for reference.*) April—3t

OPORTO AGENTS.—Those having orders for 100 vines or more, are requested to report immediately, and make no more positive promises to supply Oporto this spring.

E. WARE SYLVESTER, Lyons, N. Y.

Seeds for the Month of May.

J. M. THORBURN & CO.,

15 John Street, New York.

OFFER for immediate sowing and planting, BY MAIL or otherwise,

Imported Chinese Sugar Cane	per qt. 50c.	per bush.	$10
American " " "	" 25c.	"	4
Scarlet Italian Clover		per lb.	50
Alsike Clover		"	75
Lucerne		"	25
Chicory Seed	per lb. 75c.	per oz.	10
Fine Early Mohawk Bush Beans	per qt. 20c.	per bush.	4
*New Speckled Lima Beans		per pkt.	25
Extra Early Turnip or Bassano Beet	per oz. 10c.	per lb.	75
White Sugar Beet for Cattle	" 5c.	"	50
Long Red Mangel Wurzel	" 5c.	"	50
*Extra fine Large Drumhead Cabbage	" 25c.	"	2
" " " Flat Dutch "	" 25c.	"	2
Mammoth German Cabbage (very fine)	" 25c.	"	2
Fine Long Orange Carrot	" 10c.	"	75
Fine Altringham "	" 10c.	"	75
*Thorburn's Nonpareil Cauliflower	per pkt. 10c.	per oz.	75
Early Eight-rowed Sweet Sugar Corn	per qt. 20c.	per bu.	4
Stowell's Evergreen Sweet Corn	" 20c.	"	4
*N. J. Hybrid Cucumber (finest out door var.)	p. pkt. 5c.	p. oz	30
*New Cottager's Kale	" 5c.	"	20
*Fine White Kohl Rabi	" 5c.	"	20
*Early Curled Silesia Lettuce	" 5c.	"	20
*Butter Head Lettuce	" 5c.	"	20

(The above are the two finest varieties of Lettuce in cultivation.)

*Hybrid White Japan Melon (early and fine)		per pkt.	25
*Huntington do. (very large)		"	25
Large Red Onion	per oz. 10c.	per lb.	75
Guernsey Parsnep	" 10c.	"	75
*Seven Year Pumpkin	" 80c.		
French Scarlet Turnip Radish	" 10c.	"	75
*Madras (edible pod) Radish		per pkt.	10
*Scarlet Chinese Winter do.		per oz.	20
*Pure Hubbard Squash	per oz 20c.	per lb.	$1.25
*Honolulu Nectarine do.	" 80c.	"	$2.50
*White Leghorn do. (grows to weigh 150 lbs.)		per pkt.	25
*Berlin Teltau Turnip		per oz.	10
White French do. (finest Winter sort for stock or table use)	per oz. 10c.	per lb.	75
Improved Ruta Baga	" 10c.	"	75

FLOWER SEEDS.

*10 Beautiful Varieties of Annuals		50c.
*25 do. do. do.		$1
*50 do. do. Annuals and Perennials		2
*100 do. do. do. do.		4
*Beautiful Collections Phlox Drummondii (5 distinct sorts)		40
* do. do. Portulacca (7 distinct sorts)		35

With a general assortment of FIELD, FLOWER AND VEGETABLE SEEDS, for which see our Catalogues.

Those marked * will be *mailed free of charge* on receipt of the amount annexed—for all the others, if required by mail, an additional 1 cent per ounce must be remitted.

J. M. THORBURN & CO.,
Seed Warehouse, 15 John Street, New York.

CHINESE SUGAR CANE,

IMPORTED SEED.—The subscriber offers for sale a small quantity of GENUINE SORGHUM SEED, received from Messrs. Villmorin & Co., of Paris, which may be relied upon as *perfectly pure. Packages containing ½ pound mailed to any address* on receipt of twenty-five cents in postage stamps. No order will be filled for less than half a pound.

B. K. BLISS, Springfield, Mass.

BEDDING PLANTS AND BULBS.

NEW Verbenas, Petunias, Geraniums, Dahlias, Heliotropes, &c., &c. Also, a large assortment of the best Gladiolus and Tuberose Bulbs. HEFFRON & BEST,

April.—2t Utica, N. Y.

PRAIRIE FLOWER SEEDS.

A LARGE assortment of Prairie and other Flower and Garden Seeds, at the Utica Union Nursery Depot.

Send for a Catalogue. HEFFRON & BEST,

April.—2t Utica, N. Y.

LARGE VINES—Of the CONCORD, CREVELIN, DELAWARE, DIANA, HARTFORD PROLIFIC and REBECCA. Prices low. Send stamp for Catalogue of over eighty varieties. HEFFRON & BEST,

April.—2t Utica, N. Y.

Everybody should have a Copy.

Rural Annual and Horticultural Directory,

FOR 1862.

PRICE ONLY TWENTY-FIVE CENTS!

THE *Rural Annual and Horticultural Directory* is a book of 120 pages, published at the beginning of each year, at the office of the *Genesee Farmer*. It is filled with matter interesting and useful to every one engaged in the culture of the soil, in town, village, country or city.

Among the contents will be found articles on the following subjects:

PLANTING FRUIT TREES;
ANNUALS AND THEIR CULTURE;
EVERLASTING FLOWERS;
MANUFACTURE OF DOMESTIC WINES;
CULTURE OF DWARF AND STANDARD PEARS;
CULTIVATION OF THE CEREALS;
ON CIDER MAKING;
AMOUNT OF ROOTS FROM CLOVER AND GRASSES;
CUTTING POTATOES FOR PLANTING;
CHINESE HOGS;
HENS AND THEIR MANAGEMENT;
CULTURE OF THE PEACH IN THE MIDDLE STATES;
COVERING GRAPE VINES IN WINTER;
TREATMENT OF MILCH COWS;
APPLICATION OF MANURE;
CULTURE OF WHITE BEANS;
THE ENGLISH MUTTON SHEEP,

With a great variety of other matters of general interest.

Price only 25 cents. It will be sent prepaid by return mail to any address Send the money in postage stamps.

Address JOSEPH HARRIS,
Publisher of the *Genesee Farmer* and *Rural Annual*,
Rochester, N. Y.

☞ The *Rural Annual* has been published seven years. The seven numbers—for the years 1856, '57, '58, '59, '60, '61 and '62—will be sent, prepaid, by return mail, to any address for $1.40

French Imported Sugar Cane Seed by Mail.

ROBERT BUIST & SON, Seed Growers, Philadelphia, have just received, per Havre steamer, from Paris, a choice lot of

PURE CHINESE SUGAR CANE SEED,

which they offer to Farmers and Planters at the following prices:

BY EXPRESS, per lb., 40 cents.
BY MAIL, postage paid, per lb., 60 cents.

Will also receive in two weeks, by sailing vessel, a large quantity, which they will offer to the trade at low rates.

☞ *Remittances to accompany orders.*

ROBERT BUIST & SON,
SEED GROWERS AND NURSERYMEN,
April—2t Philadelphia, Pa.

SCHENECTADY AGRICULTURAL WORKS,

G. WESTINGHOUSE & CO., Proprietors,

MANUFACTURE Endless Chain or Railway Powers, for One, Two and Three Horses; Four and Eight Horse Lever Powers, Combined Threshers and Cleaners, Threshers and Vibrating Separators, Clover Machines with Huller and Cleaner combined—also, with Thresher, Huller and Cleaner combined; Wood Sawing Machines, both Circular and Drag; Cider Mills and Corn Shellers combined; Dog or Sheep Powers, &c.

☞ For Descriptions and Prices of above named articles, apply for an Illustrated Circular. Address

G. WESTINGHOUSE & CO.,
March.—3t Schenectady, N. Y.

WOOD CUTS FOR SALE.

WE will sell Stereotypes of the Wood Cuts used in the *Genesee Farmer* and *Rural Annual and Horticultural Directory*. A book containing impressions of over Seven Hundred of these cuts will be sent to those wishing to purchase on the receipt of 50 cents. The book contains an index, showing where descriptions of the cuts will be found.

Address JOSEPH HARRIS, ROCHESTER, N. Y.

28 CENTS EACH.—MICROSCOPES magnifying 500 times. Five, of different powers, $1. Mailed free.
Mar.—3t* F. H. BOWEN, Box 220, Boston, Mass.

Marblehead Cabbage Seed.

STONE MASON CABBAGE.—I have received numerous letters from farmers residing in Canada and all the Northern, Middle and Western States, who purchased seed last season, expressing the highest satisfaction with this Cabbage—its reliability for heading, the large size of the head, the peculiar sweetness and hardness of the head, and first-rate keeping qualities. A large number took the first premiums at the Fairs of their respective counties A number write that every plant set a handsome head; one that he sold $50 worth from less than a seventeenth of an acre of land. I have copied a number of these letters into my Seed Catalogue.

MARBLEHEAD MAMMOTH DRUMHEAD.—Numbers have written me of their success with this monster variety; that they raised cabbages weighing from 25 to 45 lbs.—the general wonder of the community. They have been raised weighing 62 lbs. I regret that I have but a limited supply of seed this season. I will fill orders as long as it lasts.

Stone Mason Cabbage, per ounce, I prepaying postage, 25 cts.; per lb., $2.67. Marblehead Mammoth, per package of about 2000 seeds, 25 cents. Hubbard Squash, per package, 12 cents.

The seed is of my own raising, and warranted of the purest quality grown.

☞ CATALOGUES forwarded to applicants, of every variety of Garden seeds and many hundred varieties of Flower seeds.

JAMES J. H. GREGORY,
March.—3t Marblehead, Mass.

Books for Farmers and Fruit Growers.

THE following works on Agriculture, Horticulture, &c., may be obtained at the Office of the GENESEE FARMER:

American Florist's Guide	75	Quimby's Mysteries of Bee-keeping Explained	1 00
Bright on Grape Culture	50	Rabbit Fancier	25 & 50
Browne's Bird Fancier	25 & 50	Richardson on the Hog	25
Cole's Am. Fruit Book	50	Do. Domestic Fowls	25
Dana's Muck Manual	1 00	Do. Pests of the Farm	25
Do. Prize Essay on Manures	25	Do. on the Dog	25
Everybody's Lawyer	$1 & 1 25	Rural Annual and Hort. Directory for 1861	25
Every Lady her own Flower Gardener	50	(First five vols. do., 1856-7-8-9 and 60, sent for	1 00
Farm Drainage, (H. F. French)	1 00	Rodgers' Scientific Agriculture	75
Genesee Farmer (bound volumes) each	1 00	Rural Poetry of the English Language, (a beautiful book for a present)	3 00
Liebig's Animal Chemistry	25	Smith's Landscape Gard'g	1 25
Liebig on Food, &c	25	Skillful Housewife	25
Do. Relations of Chemistry to Agriculture	25	The Rose Culturist	25 & 50
Miner's Bee-keeper's Manual	1 00	The Horse and his Diseases	1 00
Modern Cookery, by Miss Acton and Mrs. S. J. Hale	1 00	Wilson on Flax	25
Nash's Practical Horse Farrier	50	Youatt on the Horse	1 25
		Do. on Sheep	75
		Do. on the Hog	75

☞ Any of the above named works will be forwarded by mail post-paid on receipt of the price specified.

Address JOSEPH HARRIS, Rochester, N. Y.

FOR SEWING MACHINES.

JONAS BROOK & BROTHERS'

PRIZE MEDAL SPOOL COTTON,

200 or 500 yard spools, White, Black, and Colored.

FOR MACHINES, use BROOKS' PATENT GLACE for upper thread, and BROOKS' SIX CORD RED TICKET for under thread. Sold by all first class dealers in city and country; also in cases of 100 dozen each, assorted numbers, by WM. HENRY SMITH, Sole Agent, 36 Vesey street, New York. Ja—1y

Concord Grape Vines.

I WOULD give notice that I shall not be able to supply Vines for any more Vineyards till next fall, when I shall have about 30,000 more vines to sell, 50 per cent. lower than others ask, and on a *year's credit!* I will, however, sell a few the coming spring, one year old vines, grown in the open air, at $3 per dozen. The Concord is going up with a rush, ahead of the Delaware, and every other variety. T. B. MINER.

March.—3t Clinton, N. Y.

ITALIAN BEES.

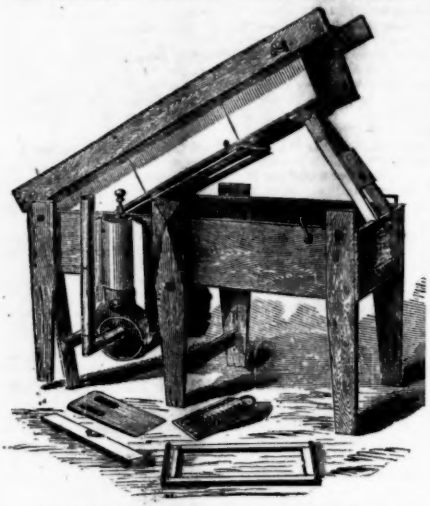
ITALIAN QUEENS of brilliant color, purity guaranteed, forwarded by express to any part of the United States. Price, $5 00. Cash to accompany the order.

☞ No Dark-colored Queens sent out from our Apiary.

BAKER & TAYLOR,
April—4t Hulmeville, Bucks County, Pa.

$100 PER MONTH—Made by any one with Stencil Tools. For a circular explaining the business,
Address JOHN MILLIKEN,
May—1y. Lawrence, Mass.

ROE'S WESTERN RESERVE
Patent Premium Vat,



With Improved Heater and Valves.

THIS well known CHEESE VAT was first introduced to the Dairymen more than seven years ago. Several thousand have since been sold throughout the country—*more than one thousand* the past season. Numerous and valuable improvements have been added from time to time, to embrace everything wanted in a Cheese Vat, and we believe it now is the most *complete, simple, durable and convenient* Cheese-making Apparatus in the world. Our long experience enables us to warrant our Vat to give entire satisfaction. By getting one of these Vats, a single Dairyman in any part of the country will have as complete an Apparatus as is used in the largest dairying localities. The Cut shows the back side of the Vat when opened, after using; the tube on the end of the heater is for the escape of steam; the knob at the top operates the valve.

Roe's Patent Adjustable Expansion Cheese Hoop.

A very nice thing. One hoop makes three sizes, and expands to lift off the cheese.

☞ *Send for a Circular, to* ROE & BLAIR,
Madison, Lake Co., Ohio.

ROOTS FOR FEEDING STOCK.

1,000 lbs. *LONG RED MANGEL WURZEL BEET.*
1,500 lbs. *WHITE SUGAR BEET.*
500 lbs. *LONG ORANGE CARROT.*
5,000 lbs. *PURPLE TOP YELLOW RUTA BAGA.*
10,000 lbs. *RED TOP "STRAP-LEAVED" TURNIP.*

The Beets are Imported French; Carrots and Turnips of our own growth—all of which are WARRANTED first quality.

Forwarded by Express at 40, 30, 75, 40 and 40 cents per lb.
Forwarded by Mail, "postage paid," at 60, 50, 95, 60 and 60 cents per lb.

☞ Wholesale quantities at greatly reduced rates. Remittances to accompany all orders.

ROBERT BUIST & SON,
SEED GROWERS AND NURSERYMEN,
April—2t Philadelphia, Pa.

ITALIAN QUEEN BEES.

I SHALL continue to breed this season from my well known stock of Italian Bees, imported in March, 1861, by steamer New York. I guarantee the perfect purity of my Queens, being in possession of the

Only Six Live Original Italian Queens

in the United States.

To suit the times, I have reduced my price to **$7 50** for a Queen and a few hundred workers. For particulars apply to

C. WM. ROSE,
April—3t 63 Exchange Place, New York.

SEEDS! GARDEN SEEDS!

FROM HALLOCK'S SEED AND AGRICULTURAL WARE-HOUSE.—The subscriber will forward by mail, postage paid to any address in the United States, a package of twenty sixpenny papers, well filled with good and reliable vegetable seeds, of good varieties to supply the garden, on receipt of $1 by mail. A part Flower seeds will be substituted if desired. Send on your orders. If you wish any particular varieties, name them and they will be substituted if they are to be had in this market.

SEEDS TO CANADA.

As there is some difficulty in sending seeds to Canada by mail, I will send them by Express, and will add *Ten extra* packages (making *Thirty* packages for one dollar!) to pay express charges on all orders received from Canada. If two or three parties would order their seeds together, they would in this way get them at exceedingly low rates. Address

E. D. HALLOCK, AGT.,
No. 31 Exchange street, Rochester, N. Y.

WM. PATERSON'S
Improved Superphosphate of Lime,

MANUFACTURED and for sale at Division Street Wharf, Newark, N. J., and by the manufacturer's agents in this and other States.

☞ CIRCULARS, with particular instructions for use, will be sent by mail when requested, or on application to his agents.

WM. PATERSON,

The oldest manufacturer of Superphosphate of Lime in the Union. April—3t

RHODE'S SUPERPHOSPHATE,
The Standard Manure,

ENDORSED by Prof. S. W. Johnson, G. A. Liebig and Dr. Evan Pugh. *Sold under a Legal Guarantee of purity and freedom from all adulteration.* H. E. MORING, GENERAL AGENT, 97 Pearl street, near Hanover Square, New York, to whom agriculturists and dealers of New York and New England will apply. B. M. RHODES & CO.,
May- 2t Office, 82 South street, Baltimore.

NANSEMOND SWEET POTATOES.

NORTHERN Farmers can grow no more profitable crop near cities. *Plants* from 1st May till July. Price, 400, $1; 1,000 $2; 5 000, $9; 10,000, $15. Packed and guaranteed to carry in good condition throughout the country.

☞ Directions for Cultivation and Preservation sent gratis. Send for one. Address M. M. MURRAY,
April—2t Loveland, Clermont Co., Ohio.

FOR SALE—By the subscriber, a MORGAN BLACK HAWK STALLION, sired by Black Hawk, Jr., is five years old, and stands fifteen and a half hands high. Is a beautiful mahogany bay, with black legs, mane and tail. Weighs about 1100 lbs. when in good condition. Is compactly built, possessing remarkable intelligence and muscular powers, having a strong, vigorous constitution. Has an easy, open gait, and bids fair to make a fast traveler. JACOB HOUSTATER,
March.—3t* Pekin, Niagara Co., N. Y.

BEAN PLANTER—Patented 1860.

WE manufacture the cheapest and best Bean Planter in use. Worked by one Horse, Plants two rows at a time, and in hills. Rows from 28 to 30 inches apart, and hills 14 inches apart. Price $12. WHITESIDE, BARNETT & CO.,
April—2t Brockport, Monroe Co., N. Y.

DWARF BROOM CORN SEED.

A NEW variety, which seldom grows more than four feet high, and produces a greater weight of corn and of superior quality to the ordinary kind, is now offered for sale for the first time by ROGERS & GEST,
April,—2t No. 133 Market St., Philadelphia, Pa.

A NEW GOOSEBERRY AND NEW RASPBERRY.

NATIVES of the Great West. The Gooseberry is smooth, prolific, larger than Houghton, of fine flavor, and free from mildew. The Raspberry is a Black Cap, better than Doolittle's Improved. Circulars on application.
April.—2t HEFFRON & BEST, Utica, N. Y,

ELECTRIC WEATHER INDICATOR.

THE original and only genuine Instrument of the kind—foretells the approach of storms 24 hours in advance. Agents will find for this article a ready and profitable market everywhere. Samples mailed for 50 cents by LEE & CO., Newark, N. J.

50 **HONOLULU NECTARINE SQUASH SEEDS**—Free, 9 cents; Giant Emperor and Truffaut's Penaflowered Asters, mixed, 9 cents; Zinnia Elegans, 9 cents, All the above free for 24 cents. P. SUTTON, Ransom, Luzerne Co., Pa. *